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Florida International University

1992-1993  
Graduate Catalog

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# Florida International University

Member of the State University System  
Miami, Florida

## 1992 – 1993 Graduate Catalog

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Florida International University believes in equal opportunity practices which conform to all laws against discrimination and is committed to nondiscrimination with respect to race, color, creed, age, handicap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary, to achieve the equalization of educational and employment opportunities.

**Note:** The programs, policies, requirements, and regulations published in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes in programs, policies, requirements, and regulations may be made without advance notice.

**The ultimate responsibility for knowing degree requirements and the requirements imposed upon students by State law rests with the students.**

This public document was produced at a cost of \$27,955 or \$1.40 per copy to inform the public about University Programs.

Fees given in this catalog are tentative pending legislative action.

# ACADEMIC CALENDAR 1992-1993\*

## Fall Semester 1992

April 1	Last day for International Students to submit applications for Fall Term admission.
June 1	Last day to submit applications for Fall Term admission (except international students).
	• Last day for International Students to submit all required supporting documents for Fall Term admission.
July 9 - 10	Freshman Orientation Sessions
July 13 - 14	Freshman Orientation Sessions
July 16 - 17	Freshman Orientation Sessions
July 20 - 21	Freshman Orientation Sessions
July 20 - 24	Control Cards available for student pick-up.
	• Short Term Tuition Loan Applications available to students planning to register.
July 22 - 24	Transfer Student Orientation Sessions.
July 27 - 31	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
August 3 - 7	Open Registration Week.
August 5	Last day for students already registered to apply for Short Term Tuition Loans.
August 7	Last day (by 5 p.m.) to pay tuition and fees to retain registered courses.
	• Last day for Financial Aid recipients to validate class schedules to retain registered courses.
	• Last day for students already registered to sign Short Term Tuition Loan promissory notes and validate class schedules.
August 18	Transfer Student Orientation.
August 19 - 20	Freshman Orientation Sessions.
August 21	Housing Check-in 9 a.m. to 8 p.m.
August 24	Short Term Tuition Loan Applications available to students planning to register on Registration Day.
August 26	Telephone Registration available.
August 27	Registration Day (10 a.m. to 7:30 p.m.)
	• Last day to initiate registration without incurring a \$100.00 late registration fee.
August 31	Classes Begin.
September 2	Last day for students who registered on or after Registration Day to apply for Short Term Tuition Loans.
Aug 31 - Sep 4	Registration for State Employees using fee waivers.
September 4	Last day (by 5 p.m.) to complete Late Registration
	• Drop/Add Period ends at 5 p.m.
	• Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability
	• Last day to change grading option.
	• Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.
	• Last day for Financial Aid recipients who registered on Registration Day to validate class schedules to retain registered courses.
	• Last day for students who registered on Registration Day to sign Short Term Tuition Loan promissory notes.
	• Last day to register for the October 3rd CLAST exam.
September 7	Labor Day Holiday (University closed).
September 25	Last day (by 5 p.m.) to apply for graduation.
	• Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition less bonding fees.
September 28 - 29	Rosh Hashanah (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin at 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.)
October 2	Faculty Convocation.
October 3	CLAST Test.
October 7	Yom Kippur (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin at 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.)
October 23	Last day (by 5 p.m.) to drop a course with a DR grade.
	• Last day (by 5 p.m.) to withdraw from the University with a WI grade.
November 11	Veterans' Day Holiday (University closed).
November 26 - 27	Thanksgiving Holiday (University closed).
December 11	Classes End.
December 12 - 19	Official Examination Period.
December 21	Commencement Exercises.
December 22	Grades due.
December 24	Grades Mailed to Students.
December 25	Christmas Holiday (University Closed).

## Spring Semester 1993

September 1	Last day for International Students to submit applications for Spring Term admission.
October 1	Last day to submit applications for Spring Term admission (except international students).
	• Last day for International Students to submit all required supporting documents for Spring Term admission.
November 16 - 20	Control Cards available for pick-up.
	• Short Term Tuition Loan Applications available to students planning to register for Spring Term.
November 18	Transfer Student Orientation Session.
November 19 - 20	Freshmen Orientation Sessions



Nov 30 - Dec 4	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
December 7 - 11	Last day for students already registered to apply for Short Term Tuition Loans.
December 11	Open Registration. Last day (by 5 p.m.) to pay tuition and fees to retain registered courses.
	<ul style="list-style-type: none"> <li>• Last day for Financial Aid recipients to validate class schedules to retain registered courses.</li> <li>• Last day for students already registered to sign Short Term Tuition Loan promissory notes and validate class schedules.</li> </ul>
January 1	New Year's Day (University Closed).
January 4	Short Term Tuition Loan Applications available to students registering on Registration Day.
January 5	Housing check-in 9 a.m. - 8 p.m.
January 6	Telephone Registration available.
January 7	Registration Day (10 a.m. to 7:30 p.m.)
	<ul style="list-style-type: none"> <li>• Last day to initiate registration without incurring a \$100.00 late registration fee.</li> <li>• Financial Aid Applications available for 1993-1994.</li> </ul>
January 11	Classes Begin.
January 11 - 15	Registration for State Employees using fee waivers.
January 13	Last day for students who registered on or after Registration Day to apply for Short Term Tuition Loans.
January 15	Last day (by 5 p.m.) to complete Late Registration.
	<ul style="list-style-type: none"> <li>• Drop/Add Period ends at 5 p.m.</li> <li>• Last day to change grading option.</li> <li>• Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability.</li> <li>• Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.</li> <li>• Last day for Financial Aid recipients who registered on or after Registration Day to validate class schedules to retain registered courses.</li> <li>• Last day for students who registered on or after Registration day to sign Short Term Tuition Loan promissory notes and validate class schedules.</li> </ul>
January 18	Martin Luther King Holiday (University Closed).
January 22	Last day to register for the February 20th CLAST exam.
February 5	Last day (by 5 p.m.) to apply for graduation.
	<ul style="list-style-type: none"> <li>• Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition less bonding fees.</li> </ul>
February 20	CLAST Test.
March 1 - 6	Spring Break.
March 12	Last day (by 5 p.m.) to drop a course with a DR grade.
	<ul style="list-style-type: none"> <li>• Last day (by 5 p.m.) to withdraw from the University with a WI grade.</li> </ul>
March 16	Deadline for 1992-1993 Financial Aid Applications for priority consideration.
April 6 - 7	Passover (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.)
April 9	Good Friday (No examinations or major quizzes may be given during the designated hours.)
April 12 - 13	Passover (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.)
April 23	Classes End.
April 24 - 30	Official Examination Period.
May 3	Commencement Exercises.
May 4	Grades due.
May 6	Grades Mailed to Students.

## Complete Summer Semester 1993

February 1	Last day for International Students to submit applications for Summer Term admission.
March 1	Last day to submit applications for Summer Term admission (except international students).
	<ul style="list-style-type: none"> <li>• Last day for International Students to submit all required supporting documents for Summer Term admission.</li> </ul>
March 16	Deadline date for 1992-1993 Financial Aid Application for priority consideration.
April 5	Transfer Student Orientation Complete Summer Term and Summer Term A.
	<ul style="list-style-type: none"> <li>• Short Term Tuition Loan Applications available to students registering for the Summer Terms.</li> </ul>
April 5 - 9	Control Cards available for pick-up.
	<ul style="list-style-type: none"> <li>• Short Term Loan Applications available to students planning to register for Summer Term.</li> </ul>
April 8 - 9	Freshman Orientation Complete Summer Term and Summer Term A.
April 12 - 16	Official Registration Week (Degree-Seeking Students only) by appointment time and day.
April 19 - 23	Open Registration.
April 21	Last day to apply for Short Term Tuition Loans for students already registered.
April 23	Last day (by 5 p.m.) to pay tuition and fees to retain registered courses.
	<ul style="list-style-type: none"> <li>• Last Day for Financial Aid recipients to validate class schedules to retain registered courses.</li> <li>• Last day for students already registered to sign Short Term Tuition Loan promissory notes and validate class schedules.</li> </ul>
April 30	Short Term Tuition Loan Applications available to students who plan to register on Registration Day.
May 3	Housing Check-In 9 a.m. to 8 p.m.
May 5	Telephone Registration
	<ul style="list-style-type: none"> <li>• Last day to register for the June 5th CLAST exam.</li> </ul>
May 6	Registration Day (10 a.m. to 7:30 p.m.).

May 10	Classes Begin.
May 10 - 14	Registration for State Employees using fee waivers.
May 12	Last day for students who registered on Registration Day to apply for Short Tuition Loans.
May 14	Last day (by 5 p.m.) to complete Late Registration.
	• Drop/Add Period ends at 5 p.m.
	• Last day to change grading option.
	• Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability.
	• Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.
	• Last day for Financial Aid recipients to validate class schedules to retain registered courses on Registration Day.
	• Last day for students who registered on or after Registration day to sign Short Term Tuition Loan promissory notes and validate class schedules.
May 31	Memorial Day Holiday (University closed).
June 4	Last day (by 5 p.m.) to apply for Graduation.
	• Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition less bonding fees.
June 5	CLAST Test.
July 2	Last day (by 5 p.m.) to drop a course with a DR grade.
	• Last day to withdraw from the University with a WI grade (by 5 p.m.)
July 4 - 5	Independence Day Holiday (University closed).
August 18	Classes End.
August 23	Grades due.
August 25	Grades Mailed to Students.

## Summer Term A

April 5	Transfer Student Orientation Session All Summer Sessions.
April 8 - 9	Freshman Orientation Sessions.
May 5	Telephone Registration.
	• Last day to register for the June 5th CLAST exam.
May 6	Registration Day.
May 10	Classes Begin.
May 10 - 14	Registration for State Employees using fee waivers.
May 14	Last day (by 5 p.m.) to complete Late Registration.
	• Drop/Add Period ends at 5 p.m.
	• Last day to change grading option.
	• Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability.
	• Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.
	• Last Day for Financial Aid recipients to validate class schedules to retain registered courses.
May 31	Memorial Day Holiday (University closed).
June 4	Last day (by 5 p.m.) to apply for graduation.
	• Last day (by 5 p.m.) to drop a course with a DR grade.
	• Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition less bonding fees.
	• Last day (by 5 p.m.) to withdraw from the University with a WI grade.
June 5	CLAST Test.
June 25	Classes End.**
August 25	Grades Mailed to Students.

## Summer Term B

June 4	Last day (by 5 p.m.) to apply for graduation.
June 21 - 22	Freshmen Orientation Sessions.
June 28	Registration Day.
July 1	Classes Begin.
July 1 - 8	Registration for State Employees using fee waivers.
July 5	Independence Day (University closed).
July 8	Last day (by 5 p.m.) to complete Late Registration.
	• Drop/Add Period ends at 5 p.m.
	• Last day to change grading option.
	• Last day (by 5 p.m.) to drop courses or withdraw from the University without incurring a financial liability.
	• Last day (by 5 p.m.) to pay tuition and fees to avoid cancellation of enrollment.
	• Last Day for Financial Aid recipients to validate class schedules to retain registered courses.
July 23	Last day (by 5 p.m.) to drop a course with a DR grade.
	• Last day (by 5 p.m.) to withdraw from the University with a 25% refund of tuition less bonding fees.
	• Last day (by 5 p.m.) to withdraw from the University with a WI grade.
August 18	Classes End.
August 23	Grades Due.
August 25	Grades Mailed to Students.

\*Calendar dates are subject to change. Please contact appropriate offices for verification and updates

\*\*Grades will not be posted on transcripts, and graduation will not be processed until the end of the Complete Summer Term, August 18.

## General Information

### State Board of Education

<b>Lawton Chiles</b>	<i>Governor</i>
<b>Jim Smith</b>	<i>Secretary of State</i>
<b>Robert Butterworth</b>	<i>Attorney General</i>
<b>Gerald Lewis</b>	<i>Comptroller</i>
<b>Bob Crawford</b>	<i>Commissioner of Agriculture</i>
<b>Betty Castor</b>	<i>Commissioner of Education</i>
<b>Tom Gallagher</b>	<i>Treasurer</i>

### Florida Board of Regents

<b>Hon. Charles B. Edwards, Sr.</b>	<i>Chairperson, Fort Myers</i>
<b>Hon. J. Clint Brown</b>	<i>Vice Chairman, Tampa</i>
<b>Hon. DuBose Ausley</b>	<i>Tallahassee</i>
<b>Hon. Betty Castor</b>	<i>Commissioner of Education</i>
<b>Hon. Alec P. Courtelis</b>	<i>Miami</i>
<b>Hon. Robert A. Dressler</b>	<i>Fort Lauderdale</i>
<b>Hon. Pat N. Groner</b>	<i>Pensacola</i>
<b>Hon. Perla Hantman</b>	<i>Miami Lakes</i>
<b>Hon. James F. Heekin, Jr.</b>	<i>Orlando</i>
<b>Hon. Cecil B. Keene</b>	<i>St. Petersburg</i>
<b>Hon. Elizabeth Lindsay</b>	<i>Sarasota</i>
<b>Hon. Jon C. Moyle</b>	<i>West Palm Beach</i>
<b>Hon. Thomas P. Petway III</b>	<i>Jacksonville</i>
<b>Hon. Carolyn K. Roberts</b>	<i>Ocala</i>
<b>Hon. Tim Cerio</b>	<i>Student Regent</i>
<b>Hon. Charles B. Reed</b>	<i>Chancellor, State University System</i>

### University Officials

<b>Modesto A. Maidique</b>	<i>President</i>
<b>James A. Mau</b>	<i>Provost and Vice President for Academic Affairs</i>
<b>Richard J. Correnti</b>	<i>Vice President for Student Affairs</i>
<b>Paul D. Gallagher</b>	<i>Vice President for North Miami Campus</i>
<b>Michael P. Morgan</b>	<i>Vice President for University Relations and Development</i>
<b>Leonardo Rodriguez</b>	<i>Vice President for Business and Finance</i>

### History

Florida International University, a member institution of the State University System of Florida, was established by the State Legislature on June 22, 1965. Classes began at University Park on September 19, 1972, with 6,000 students enrolled in upper-division undergraduate and graduate programs. In 1981 the University added lower-division classes for freshmen and sophomores, expanding its enrollment capacity. In 1984, the University re-

ceived authority to begin offering degree programs at the doctoral level; these programs received Level IV accreditation from the Southern Association of Colleges and Schools (SACS) in 1986.

The Florida Board of Regents appointed Charles E. Perry as the first president of FIU in July of 1969. He was succeeded in June, 1976 by President Harold Brian Crosby. Gregory Baker Wolfe was named the third president in February, 1979. Modesto A. (Mitch) Maidique was named the fourth President of Florida International University on August 27, 1986. Maidique received his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology and was associated with MIT, Harvard, and Stanford for 20 years.

### Goals

Florida International University (FIU), a comprehensive, multi-campus urban research institution, is committed to providing both excellence and access to all qualified students desiring to pursue higher education. FIU offers a comprehensive undergraduate liberal arts education structured around a rigorous core curriculum. The University also offers a number of highly-regarded master's and doctoral programs in six of its colleges and schools.

The University's academic programs are designed to achieve four major goals:

1. To provide an excellent university education for all qualified students, challenging and stimulating them at the lower-division level and preparing them to choose a major field in the upper division, leading to selection of a profession or occupation or further study at the graduate level. FIU encourages its graduates, as educated citizens, to pursue lifetime opportunities to contribute to the development of their community's cultural, aesthetic, and economic environments through participation.

2. To generate new knowledge through a vigorous and ambitious commitment to research in all academic disciplines and to encourage creativity by fostering an atmosphere conducive to the expression of ideas, artistic development, and communication with the external community.

3. To serve the university's external community, with special attention to Dade, Broward, and Monroe counties, enhancing South Florida's capacity to meet its cultural, economic, social and urban challenges as we move into the 21st century.

4. To foster greater global understanding as a major center of international education for the people of the Americas and the international community.

### Campuses

The University operates two campuses in Dade County and two educational sites in Broward County.

The main campus is located at University Park in west Dade County, approximately 10 miles west of downtown Miami.

The North Miami Campus is adjacent to Biscayne Bay, at Northwest Biscayne Boulevard and 151st Street.

The Broward County area is served cooperatively by FIU and FAU with locations on the campus of Broward Community College in Davie and the University Tower in Fort Lauderdale.

### University Park

The University Park is sited on 342 acres of land. The campus has ten major buildings including a recently completed \$7 million College of Business Administration building. The campus development plan envisions four major expansion phases to the Library building, planned as a 14 story tower, beginning with the \$11 million base construction in 1992; a \$10 million Arts Complex to be completed in 1993; a \$1.5 million Baseball Stadium Complex to be completed in 1993; a \$1.4 million Student Health/Wellness Services building (under construction) to be completed in 1992; a Labor Studies building to be completed in 1993; a Nautilus/Fitness Center to be completed in 1992; a Biology Greenhouse and Conservatory to be completed in 1993; a \$7.5 million Education building to be completed in 1994; an \$8.4 million Campus Support Complex to be completed in 1995; a Health and Life Sciences building to be completed in 1994; and major campus infrastructure improvements, including a new major campus entrance mall for Tamiami Trail access, scheduled for completion in early 1992.

### North Miami Campus

The North Miami Campus encompasses 200 acres on Biscayne Bay, including a large natural cypress preserve. Campus facilities include six campus buildings, an Olympic-standard Aquatic Center, apartment style housing for 552 students, and the Library with a capacity of 500 seats and 232,000 volumes, classrooms, a modern foreign language laboratory and an instructional media laboratory. A \$4 million remodeling was recently completed

to accommodate the growing Hospitality Management program, including a 250 seat auditorium, a restaurant, lecture demonstration labs and multi-purpose commercial kitchens. Current plans are working on a Student Health/Wellness Center to be completed in 1993 and a Child Care Center also to be completed by 1993. Future development plans envision a \$2 million project to complete classroom and lab space in the Hospitality Management building; a new \$9 million Public Affairs/Journalism building; and a new \$11 million Community Conference Center.

### FIU Broward

FIU faculty and administrators provide a comprehensive university presence in Broward County in cooperation with Broward Community College (BCC) and Florida Atlantic University (FAU). FIU offers a select number of full degree programs and a variety of supplementary courses at two Broward locations.

Undergraduate and graduate programs are held at the Central Campus of BCC, which is located in Davie. In concert with BCC, a "2+2" program permits students to enroll at BCC for the first two years of study and then to transfer to FIU for the completion of their undergraduate work, receiving a bachelor's degree.

The University Tower in downtown Fort Lauderdale serves as the administrative headquarters for the FIU Broward Programs and as a major instructional facility. It is utilized for graduate programs, research, administrative offices, and services. Both FIU Broward facilities are staffed to provide support services such as academic advisement, admissions, registration, and student activities.

### General Academic Information

Florida International University offers over 180 academic programs at the bachelor's, master's, and doctorate degree levels which are designed to respond to the changing needs of the growing metropolitan areas of South Florida. Degree programs are offered in the College of Arts and Sciences, College of Business Administration, College of Education, College of Engineering and Design, College of Health, School of Hospitality Management, School of Journalism and Mass Communication, School of Nursing, and School of Public Affairs and Services.

### Accreditation and Memberships

All academic programs of the University are approved by the State Board of Education and the Florida Board of Regents. The University is an accredited member of the Southern Association of Colleges and Schools. The professional programs of the respective schools of the University are accredited or approved by the appropriate professional associations, or are pursuing full professional accreditation or approval.

The University is also an affiliate member of the Association of Upper Level Colleges and Universities, the American Association of State Colleges and Universities, the Florida Association of Colleges and Universities, the American Association of Community and Junior Colleges, a Charter Member of the Southeast Florida Educational Consortium, and numerous other educational and professional associations.

The following agencies have accredited professional programs at the University:

Accreditation Board for Engineering and Technology

Accrediting Council on Education in Journalism and Mass Communications

American Assembly of Collegiate Schools of Business

American Association of Colleges of Teacher Education

American Chemical Society

American Council of Construction Education

Council of Graduate Schools in the United States

Florida Consortium on Multilingual and Multicultural Education

National Accrediting Agency for Clinical Laboratory Sciences

National Association of Colleges of Nursing

National Association of Schools of Public Affairs

National League of Nursing

The American Dietetics Association

The American Medical Association

The American Health Information Management Association

The American Occupational Therapy Association

The American Physical Therapy Association

The American Society of Clinical Pathologists

The Council on Social Work Education

### Southeast Florida Educational Consortium

Florida International University, Broward Community College, and Miami-Dade Community College are charter members of the Southeast Florida Educational Consortium, which was established in 1977. This organization links the member institutions in planning, maintaining, and evaluating cooperative efforts in academic programs, student services, and administrative support services.

The overall objectives of the Consortium are to:

1. Increase and improve educational opportunities.
2. Ensure smooth transition from the community college to the university.
3. Provide easy access to institutional services for students and faculty.
4. Effectively utilize human and fiscal resources.

Descriptions of specific cooperative arrangements between the Consortium member campuses and student and faculty procedures are given in the appropriate sections of this Catalog.

### Academic Programs

#### College of Arts and Sciences

Master of Arts in:  
Comparative Sociology  
Economics  
Spanish Studies  
History  
International Studies  
Linguistics

Master of Fine Arts in Creative Writing

Master of Science in:  
Biology  
Chemistry  
Computer Science  
Environmental and Urban Systems  
(jointly with the College of Engineering and Design)

Geology  
Mathematical Sciences  
Psychology  
Physics

Doctor of Philosophy in:  
Biology  
Computer Science  
Economics  
Psychology

#### College of Business Administration

Master of Accounting  
Master of Business Administration  
Master of International Business  
Master of Science in Finance

Master of Science in Management Information Systems  
 Master of Science in Taxation  
 Doctor of Philosophy in Business Administration

## College of Education

Master of Science in:  
 Adult Education and Human Resource Development  
 Art Education  
 Counselor Education (School and Community Mental Health Counseling)  
 Diagnostic Teaching (majors in Emotional Disturbance, Mental Retardation, and Specific Learning Disabilities)  
 Early Childhood Education  
 Educational Leadership  
 Elementary Education  
 English Education  
 Health Education (Exercise Physiology Track)  
 Health Occupations Education  
 Home Economics Education  
 International Development Education  
 Modern Language Education (majors in Spanish and French)  
 Mathematics Education  
 Music Education  
 Parks and Recreation Management  
 Physical Education  
 Reading  
 Science Education  
 Social Studies Education  
 Teaching English to Speakers of Other Languages (TESOL)  
 Technology Education  
 Vocational Education (majors in Administration, Supervision, and Technical and Vocational Industrial Education)  
 Education Specialist (Ed.S.)  
 Curriculum and Instruction  
 Educational Leadership  
 School Psychology  
 Doctoral Programs (Ed.D.)  
 Adult Education and Human Resource Development  
 Community College Teaching  
 Curriculum and Instruction  
 Educational Leadership  
 Exceptional Student Education

## College of Engineering and Design

Master of Science in:  
 Civil Engineering  
 Computer Engineering  
 Construction Management  
 Electrical Engineering  
 Environmental Engineering  
 Environmental and Urban Systems  
 Industrial Engineering  
 Mechanical Engineering

Master of Landscape Architecture

## College of Health

Master of Science in:  
 Dietetics and Nutrition  
 Medical Laboratory Sciences  
 Occupational Therapy  
 Physical Therapy

Master of Public Health

## School of Hospitality Management

Master of Science in Hotel and Food Service Management

## School of Journalism and Mass Communication

Master of Science in Mass Communication

## School of Nursing

Master of Science in Nursing

## School of Public Affairs and Services

Master of Science in Criminal Justice  
 Master of Health Services Administration  
 Master of Public Administration  
 Master of Social Work  
 Doctor of Philosophy in Public Administration (jointly with FAU)  
 Doctor of Philosophy in Social Welfare

## North Miami Campus Programs

### College of Education

Contact the College for information.

### College of Health

Master of Public Health

### School of Hospitality Management

Master of Science in Hotel and Food Service Management

### School of Journalism and Mass Communication

Master of Science in Mass Communication

### School of Public Affairs and Services

Master of Science in Criminal Justice  
 Master of Health Services Administration  
 Master of Public Administration

Master of Social Work

Doctor of Philosophy in Public Administration (jointly with FAU)  
 Doctor of Philosophy in Social Welfare

## Broward County Programs

### College of Business Administration

Master of Accounting (BC)  
 Advanced Certificate in Accounting (UT)  
 Master of Science in Finance (BC/UT)  
 Master of Science in Taxation (UT)  
 Doctor of Philosophy in Business Administration (UT)

### College of Education

Master of Science in Adult Education and Human Resource Development (BC)  
 Master of Science in Elementary Education (BC)  
 Courses for Teacher Education (BC)  
 Courses in Vocational Education (BC)  
 Doctor of Education in Adult Education and Human Resource Development (BC)  
 Doctor of Education in Community College Teaching

### College of Engineering and Design

Master of Science in Construction Management (BC)

### School of Hospitality Management

Courses in Hospitality Management

### School of Public Affairs and Services

Master of Health Services Administration (BC/UT)  
 Master of Social Work (UT)  
**Primary Location:**  
 BC = Broward Program - Davie  
 UT = University Tower - Fort Lauderdale

In addition to the degree programs, a variety of support courses are offered from the College of Arts and Sciences.

### Certificates

Certificate Programs are structured combinations of courses with a common base of interest from one or more disciplines into an area of concentration.

Successful completion of a Certificate Program is entered on the

student's transcript and records. Two types of certificates are awarded:

#### Academic Certificate

Awarded by an academic unit to a student at the time of awarding a bachelor's degree; or upon completion of the appropriate coursework to a student who already has a bachelor's degree.

An academic certificate shall not be awarded to a student who does not possess either a bachelor's degree or does not complete a bachelor's degree program. An academic certificate is to be interdisciplinary in nature, to the greatest extent possible.

#### Professional Certificate

Awarded by an academic unit to an individual who completes the appropriate coursework in the area of concentration. The professional certificate does not need to be interdisciplinary or associated with a degree program.

For details and course requirements, refer to the appropriate catalog or section in each College or School.

### College of Arts and Sciences

#### Academic Certificates in:

- Actuarial Studies
- American Studies
- Consumer Affairs
- Environmental Studies
- Ethnic Studies
- Gerontological Studies
- International Studies
- Labor Studies
- Latin American and Caribbean Studies
- Linguistic Studies
- Western Social and Political Thought
- Women's Studies

Professional Certificates in:

- Labor Studies and Labor Relations
- Legal Translation and Court Interpreting
- School of Journalism
- Tropical Commercial Botany
- Translation Studies

### College of Business Administration

- Banking
- International Bank Management
- International Business
- Marketing

### College of Education

The College offers a variety of Professional Certificate and Add-On Teacher Certification programs. Refer to the College of Education program listing section.

### College of Engineering and Design

#### Professional Certificates in:

- Advanced Apparel Design
- Apparel Production Management
- Retailing Management
- Heating, Ventilation, and A/C Design
- Industrial and Labor Relations
- Industrial Safety Production and Manufacturing

Academic Certificate in Management and Consumer Affairs.

### College of Health

- Medical Record Coding
- Occupational Therapy
- Prosthetics and Orthotics

### School of Hospitality Management

- Lodging Management
- Food Service Management
- Travel and Tourism Management

### School of Journalism and Mass Communication

Professional Certificate in Student Media Advising

### School of Nursing

Professional Certificate in Advanced Nursing Practice in Adult Health

### School of Public Affairs and Services

#### Professional Certificates in:

- Gerontology
- Human Resource Policy and Management
- International Comparative and Development Administration
- Justice Administration and Policy Making
- Public Management

## Office of Admissions

Florida International University encourages applications from qualified applicants without regard to sex, physical handicap, or cultural, racial, religious or ethnic background or association.

Applicants to a graduate program of the University must meet the minimum standards set forth by the Florida Board of Regents (BOR), the University, and when applicable, additional requirements set by each department for admission to a graduate program. Applicants must check the individual departmental requirements.

A student seeking admission into a graduate program of the University must have a bachelor's degree or equivalent from a regionally accredited institution or, in the case of foreign students, an institution recognized as an institution of higher learning. The applicant must submit official copies of all transcripts.

In most cases, an applicant must, at a minimum, present either a 'B' average in upper level work, or a combined score of 1000 on the Graduate Record Exam (GRE) or a score of 500 on the Graduate Management Admission Test (GMAT) when applicable and required by the individual department, or a graduate degree from an accredited institution.

All graduate applicants, regardless of previous grade point average or degrees, are required to submit the appropriate test scores.

An applicant who fails to meet these criteria may appeal the admission decision and be considered under the BOR's Exception Policy. This policy allows up to 10 percent of the graduate students admitted for a particular academic year as exceptions to the above criteria.

Foreign graduate applicants are accepted subject to space and fiscal limitations. In addition to the above University admission requirements, foreign applicants must be academically eligible for further study in their own country and must demonstrate proficiency in the English language by presenting a minimum score of 500 or higher on the Test of English as a Foreign Language (TOEFL). However, other departments may require a higher TOEFL. Applicant must check the individual departmental requirements. For TOEFL information contact: TOEFL Program, Box 899, Princeton, New Jersey 08540, U.S.A.

## Application Deadlines

### Summer

**February 1:** Last day for international students to submit applications for Summer Term.

**March 1:** Last day for international students to submit all supporting academic credentials, appropriate test scores and Declaration and Certification of Finances.

Last day to submit applications for Summer Term.

### Fall

**April 1:** Last day for international students to submit applications for Fall Term.

**June 1:** Last day for international students to submit all supporting academic credentials, appropriate test scores and Declaration and Certification of Finances.

Last day to submit applications for Fall Term.

### Spring

**September 1:** Last day for international students to submit applications for Spring Term.

**October 1:** Last day for international students to submit all supporting academic credentials, appropriate test scores and Declaration and Certification of Finances.

Last day to submit applications for Spring Term.

All application not received by the deadline date will be considered for the following term.

## Transfer of Graduate Credit from Other Institutions

Doctoral programs may accept a maximum of 36 semester hours earned elsewhere as a graduate degree-seeking student. A maximum of six semester hours of graduate credit earned from another institution in a non-degree seeking status may be transferred. A maximum of six thesis credit hours may be transferred to a doctoral program only if they are part of an earned degree.

Masters programs may accept a maximum of six semester hours of graduate credit earned from another institution beyond a bachelor's degree.

Acceptance of transfer credits for a course is dependent upon the following provisions:

a. the student received a grade of 3.0 or better on a 4.0 scale

b. the course was taken at an accredited institution

c. the course was relevant, as judged by the admissions committee of the department or program, to the graduate program in which the student is accepted

d. the course is listed on an official transcript received by the Office of Admissions

e. the course was completed within the six years preceding admission to the program (does not apply to credits earned as part of a completed graduate degree)

## International Admissions

### Graduate Admission Standards and Procedures

International student applicants must meet the admission requirements of the University as described in the previous sections and comply with the following:

#### Academic Records

Appropriate official transcripts and their English translations validated by an official public translator, and all other appropriate credentials, must be forwarded to the Office of Admissions.

#### Declaration and Certification of Finances

Upon receipt of the application for admission, the Declaration and Certification of Finances will be mailed to the applicant. It must be completed and returned to the Office of Admissions. A Certificate of Eligibility (Form I-20A) will be issued once the applicant has been found admissible to the university.

The University is required by immigration authorities to check carefully the financial resources of each applicant prior to issuing the Form I-20A. Therefore, it is important that applicants are aware of the cost of attending the University and have the necessary support funds for the period of enrollment. Applicants should refer to the Annual Estimate of Cost Chart.

The total funds available for the student for the first or second academic year, or both, must equal the total estimate of institutional costs and living expenses. All items in the Declaration and Certification of Finances must be accurately answered to avoid unnecessary delay in processing. This document must be received by the Office of Admissions two months prior to the anticipated entry date.

Refer to the Annual Estimate of Cost table for more information. A mar-

## Annual Estimate of Costs for Graduate International Students

### Single Student (18 sem hrs)

Tuition and Fees <sup>1</sup>	\$ 5,163
Maintenance <sup>2</sup>	\$ 9,900
Books & Supplies	\$ 800
Medical Insurance <sup>3</sup>	\$ 500
Total	\$ 13,363

<sup>1</sup>Tuition and fees are subject to change. Fees include the Student Health Fee (\$24.50 per semester) and the Athletic Fee (\$10.00 per semester). Amounts shown reflect nine semester hours for graduate during Fall and Spring terms only.

<sup>2</sup>Maintenance is estimated at \$825 per month to cover room, board, clothing, transportation, and incidentals. This cost is for 12 months.

<sup>3</sup>All international students are required to carry medical insurance.

ried student should plan on an additional \$4,800 in costs to cover the living expenses of a spouse.

A couple with children should anticipate further yearly additional costs of no less than \$3,000 for each child.

### Medical Insurance

The State of Florida requires that all international students maintain health insurance coverage to help defray the costs in case of catastrophic medical emergency. The policy must provide specific levels of coverage which have been established to ensure that the policy is adequate to provide for costs at U.S. hospitals, usually much higher than costs in many other parts of the world. In addition, a policy must have a claims agent in the United States who may be contacted by medical providers and who facilitates prompt payment of claims. The University has approved a plan which meets the state requirements and which meets the needs of most students; however, a student may select alternate coverage provided it meets the state requirements for minimal coverage. A copy of these requirements is available from the Office of International Services. Students are advised not to purchase insurance policies prior to arrival without verifying that the policies meet FIU/SUS requirements. Compliance with the insurance regulation is required prior to registration.

## Required Entrance Tests

Graduate applicants are required to take either the GRE or the GMAT. For information on the tests, applicants must contact the Educational Testing Service, Princeton, New Jersey 08540, U.S.A. Information about test center locations may also be obtained at the American Embassy in the applicant's home country.

## Tuition

An international student is considered a non-resident and is assessed non-resident fees. Immigration regulations require an international student to attend school at least two semesters within an academic year. A graduate student is required to take a minimum of nine semester hours per term. Please refer to the section on Student Fees and Student Accounts for more information.

## Full-Time Enrollment

Non-immigrant alien students in F-1 visa status are required by United States immigration regulations to be enrolled full-time, except for the Summer Terms, and to make satisfactory progress toward the degree program in each term; otherwise the student's immigration status may be jeopardized. Full-time graduate enrollment is defined as enrollment every term in a minimum of nine semester hours.

The laws and regulations of the United States Department of Justice, Immigration and Naturalization Service state:

It is the student's responsibility to comply with all non-immigrant alien requirements as stated under the United States laws under Section 101(a)(15)(f)(i) of the Immigration and Nationality Act.

Granting official Extension of Stay is dependent upon the student's achieving normal academic progress toward the degree requirements.

## Employment

The legal regulations governing F-1 student employment are complex, and advisors are available in the Office of International Services to explain these regulations. In general, however, employment is available only to students who maintain their legal status in the U.S. and is regulated under three categories:

a) on-campus employment: F-1 students may be employed on the FIU campus for a maximum of 20 hours per week during fall and spring semesters while school is in session, and full time during holidays, vacations, and sum-

mer. On-campus employment includes teaching and research assistantships for graduate students and hourly part time work. Students must contact individual campus departments to inquire about employment opportunities.

b) off-campus employment: F-1 students may request off-campus employment only after maintaining F-1 status for at least one full academic year. Employment is authorized only after the employer files a labor attestation with the U.S. Department of Labor, certifying that he or she has attempted to find a qualified U.S. citizen or permanent resident to fill the job vacancy but has been unable to do so. Off-campus employment opportunities are not readily available, and students should not rely on off-campus employment as a source of income to finance their studies.

c) Practical training: F-1 students may request practical training employment to accept jobs related to their studies. Students usually pursue practical training employment after completion of degree requirements, although in some cases practical training may be authorized prior to completion of studies. Since practical training employment is limited to one year of full-time employment, students cannot rely on it as a source of income to finance their studies.

**Note:** An international student will not be granted admission to the University until all academic and non-academic requirements have been met. Under no circumstances should a student come to the University without having received the official Letter of Admission and the I-20A Form.

All correspondence and document submissions should be directed to: Office of Admissions, Florida International University, PC 140, University Park, Miami, Florida 33199 U.S.A., telephone: (305) 348-2363.

## Credit For Non-College Learning

Graduate credit will not be awarded for life experiences.

In cases where a student's learning experience would appear to have been sufficient to develop the understanding and skills associated with a course that would otherwise be included in his or her graduate program of study, he or she will be allowed to register for Independent Study credits and demonstrate competency through development of an appropriate project acceptable to the faculty member who represents that specific area of specialization.

Not more than 10 semester hours of a 30 semester hour master's degree,

nor 15 semester hours of a 60 semester hour master's degree, may be so earned. A student wishing to have this policy waived, wholly or in part, may petition the Dean of the academic unit to which he or she has been admitted for special consideration, and final responsibility for a decision will rest with the Dean.

## Traveling Scholar Program

The University participates in a traveling scholar program which enables a graduate student to take advantage of special resources, special course offerings, research opportunities, unique laboratories and library collections available on another campus but not available on his or her own campus. Further information may be obtained from the Dean of the graduate program in which the student is enrolled.



## Office of Registration and Records

The Office of Registration and Records is responsible for directing the University Registration activities including off-campus course registration, and establishing, maintaining, and releasing students' academic records. The office is also responsible for space and scheduling, Veteran's Affairs, off-campus registration, and graduation.

The University Park office is located in PC 130, 348-2383, the North Miami Campus office is located in ACI-160, 940-5750, and the Broward Programs at Broward Community College, Central Campus, 475-4160 and University Tower, 355-5236.

### Classification of Students

The University classifies students as follows:

#### Degree-Seeking Students

This category includes students who have been admitted to a degree program, but have not completed the requirements for it.

**Graduate** - Students admitted to a graduate program.

**Post Graduate** - Students admitted to a doctoral program.

#### Non-Degree-Seeking Students

These students may be either affiliated or unaffiliated in their status. Unaffiliated students are limited to taking one semester of courses at the University. Affiliated students must be approved by the appropriate College or School and must meet its specific requirements. Under no circumstances may more than 15 hours, taken as a non-degree-seeking student, be applied toward graduation requirements at the University, if the student should change from non-degree-seeking to degree-seeking status.

The following regulations will apply to non-degree-seeking students:

1. Such students are not required to meet the usual admission requirements and are not officially admitted as regular students. Enrollment as a non-degree-seeking student does not imply a right for future admission as a regular, degree-seeking student. Credit earned will not be counted toward a degree at the University unless such students subsequently apply for regular admission and are accepted as undergraduate or graduate students.

2. Registration is permitted on a space-available basis and is determined at the time of registration. Non-degree-seeking students may not register during the official registration week for degree-seeking students.

3. No more than 15 undergraduate level and 12 graduate level semester hours earned as a non-degree-seeking student may be counted toward a degree. The appropriate Dean must approve the acceptance of such credit.

4. Non-degree-seeking students will not be allowed to register for more than one term without obtaining admission to a degree program at the University; obtaining admission into a formal Certificate Program; or acquiring affiliated status from the department in which they are registering.

5. Applicants denied admission to the University will not be allowed to register as non-degree-seeking students for a period of one year without obtaining admission into a formal Certificate Program or obtaining affiliated status from the appropriate academic department.

6. Immigration regulations prevent most foreign nationals from enrolling without being admitted into a formal degree or certificate program, depending on the visa type. Therefore, international students will not be permitted to enroll as non-degree-seeking students.

#### Affiliated Students

Students applying for affiliated status as non-degree seeking students must be approved by the appropriate Dean's Office in accord with criteria approved by that College or School's Faculty Curriculum Committee.

#### Certificate Students

This category includes students who have been accepted into a specific certificate program by the academic department responsible for that program. Certificate programs are subject to all University regulations.

### Academic Degree Requirements

#### Master's Degree

The University will confer the master's degree when the following conditions have been met:

1. Recommendation of the faculty of the College or the School awarding the degree.

2. Certification by the Dean of the College or the School concerned that all requirements of the degree being sought have been completed.

3. Earned an overall average GPA of 3.0 in all courses.

4. Met the grade requirements for major, core courses, and course sequences established by the appropriate College or School.

#### Doctoral Degree

The University will confer the doctoral degree when the following conditions have been met:

1. Recommendation of the faculty of the College or School awarding the degree.

2. Completion of the residency and time limitation requirements.

3. Satisfactory completion and defense of a doctoral dissertation.

4. Certification to the Registrar by the Dean of Graduate Studies that all academic requirements have been met.

### Academic Definitions

#### Program and Course Regulations

**Credit Hour:** The term credit hour as used refers to one hour of classroom or the equivalent each week for an entire academic term.

**Major:** An integral part of the bachelor's and master's degree is a major concentration of coursework in an approved academic discipline or area. The exact course and credit requirements and prerequisites for each major are outlined in the departmental program areas in the Catalog.

**Electives:** Students may usually select courses from any academic area to complement their area or areas of study or to meet their interests in order to fulfill the credit hour requirements for the master's degree. Prerequisite course requirements should be considered in selecting elective courses. Students should refer to their academic program requirements concerning electives.

#### Certificate Programs

Students who have completed an approved certificate program will have an appropriate notation placed on their transcript.

#### College/Major Classification

Graduate students are classified according to the college or school and major of their degree program.

Full time course load: Graduate, nine semester hours.

### Change of College/School or Major

A fully admitted graduate student can change majors, provided he or she meets the entrance requirements of the new program, by obtaining and submitting the form to the Office of Registration and Records. The student is subject to the program requirements in effect at the time of the change of major.

### Registration

The following registration information is subject to change and students must verify the dates with the Office of Registration and Records, PC 130, University Park; or ACI-160, North Miami Campus; or at the Broward Program, BCC Central Campus, 475-4160 and University Tower, 355-5236.

Registration for courses is as follows:

**Registration Week** is held during the preceding semester (check the Academic Calendar for the dates) and ends one week later. Degree seeking students are given an appointment day and time based on their classification, GPA, and credit hours completed. Students may add/drop at this time.

**Open Registration** is held following Registration Week and lasts for one week only. There is no appointment day and time and registration is on a first-come, first-serve basis. All students who have not yet registered are encouraged to do so at this time. Students who have already registered may add or drop courses during this period.

**Registration Day** is held prior to the beginning of the term and is for one day only. Students who have not registered should do so at this time to avoid a \$100.00 late registration fee. (Check the Academic Calendar for the date.)

All Students, degree and non-degree-seeking, registering for more than 18 credit hours during one semester must obtain the approval and the signature of the Dean of their College or School.

### Telephone Registration

All students are able to register, add and drop courses using a touchtone telephone. Students able to use this system are given a security access code and information on the Voice Response Telephone Registration system by the Office of Registration and Records.

### Immunization

To register for courses, students must provide the University Health Clinic (Tower Trailer University Park; TC 110,

North Miami Campus) with documentation of immunization against measles and rubella. Students should contact the Health Clinic for more information.

### Late Registration Fee

Any student, degree-seeking or non-degree-seeking, who initiates registration after Registration Day is assessed a \$100.00 late registration fee. A student may initiate late registration during the first week of classes.

### Dropping and Adding Courses

The Official Drop/Add period runs throughout the first week of classes (Refer to the Academic Calendar for specific dates). During this period a student may add courses or register with a late registration fee. Students may also drop courses or withdraw from the University with no records kept of the courses and without a tuition fee liability. The student must submit a drop/add card to the Office of Registration and Records to officially drop a course. If the tuition fee has already been paid, the student must fill out a Refund Request Form with the Cashier's Office.

### Late Adds

Students may add courses with appropriate authorization and signatures until the end of the second week of classes. No course can be added after this deadline.

### Late Drops

Courses officially dropped after Drop/Add period and through the eighth week of the term (summer terms have different deadlines, please refer to calendar dates) are recorded on the student's transcript with a symbol of 'DR' (dropped). The student is financially liable for all dropped courses. The student must submit a Course Drop Form to the Office of Registration and Records to officially drop a course. Non-attendance or non-payment of courses will not constitute a drop.

A student may appeal the deadline for a late drop by submitting the Appeal for Late Drop form. A drop after the deadline will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue; the student must provide appropriate documentation of such. The instructor will designate whether the student was passing or failing the course at the time of the appeal to drop. The deadline to submit this appeal is the last day of classes of the term.

### Withdrawal from the University

A currently registered student can withdraw from the University only during the first eight weeks of the semester. In the Summer Semester, withdrawal deadlines will be adjusted accordingly. A Withdrawal Form must be filled out and submitted to the Office of Registration and Records. Non-attendance or non-payment of courses will not constitute a withdrawal. (Refer to the Academic Calendar for the deadline dates.)

The transcript record of a student who withdraws before or during the Drop/Add period will contain no reference to the student being registered that semester and no tuition fee is assessed. If the tuition has already been paid, a Refund Request Form must be filled out with the Cashier's Office. If a student withdraws from the University prior to the end of the fourth week of classes, a 25 percent refund, less a bonding fee, will be made.

The transcript record of a student who officially withdraws after Drop/Add period and before the end of the eighth week of the term will contain a 'W' for each course.

The transcript record of a student who stops attending the University without officially withdrawing from the University will contain an 'F' grade for each course.

A student may appeal the deadline for a late withdrawal by submitting the Appeal for Late Withdrawal form. A withdrawal after the deadline will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue. The student must submit appropriate documentation of such. The instructor will designate whether the student was passing or failing the course(s) at the time of the appeal to withdraw. The deadline to submit this appeal is the last day of classes or the term.

### Grading System

	Grade Points Per Grades Credit Hour
A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
D-	0.67
F	Failure 0.00
P	Satisfactory (Pass) N/A

IN	Incomplete <sup>1</sup>	N/A
WI	Withdrew from University	N/A
WP	Withdrew after deadline with passing grade	N/A
WF	Withdrew after deadline with failing grade	0
AU	Audit	N/A
DR	Dropped Course	N/A
DP	Dropped after deadline with passing grade	N/A
DF	Dropped after deadline with failing grade	0
NR	Grade Not Reported or Invalid <sup>2</sup>	N/A
EM	Examination	N/A

<sup>1</sup>IN is only a temporary symbol. It will revert to the default grade after two terms.

<sup>2</sup>NR is only a temporary symbol. It will default to an 'F' after two terms if it is not changed by the instructor.

**Note:** All courses for which a student is officially registered at the end of the Drop/Add Period and on which a Letter Grade, a 'DF', or a 'WF' is received are calculated in the GPA.

### Grading Options

The Colleges and the Schools make the determination of the grading option of each course. A course may be offered for a letter grade as listed above or Pass/Fail; or for an optional grade in which the student has a choice of either receiving a letter grade or pass/fail; or the student may choose to audit a course and an 'AU' grade will be recorded on the student's records. The grading option must be indicated at the time of registration. The grading option cannot be changed after the Drop/Add period. There are no exceptions to this deadline.

To register for an audit, the student must obtain the permission and signature of the instructor of the course audited.

### Incomplete Grade

An incomplete grade is a temporary symbol given at the discretion of the instructor for work not completed because of serious interruption not caused by the student's own negligence. An Incomplete must be made up within two semesters or it will automatically default to the grade that the student earned in the course. There is no extension of the two semester deadline. The student must not register again for the course to make up the incomplete.

### Forgiveness Policy

A forgiveness policy is a way in which a student may repeat a limited number of courses to improve his or her grade point average (GPA) by having only the grade received on the last repeat used in its calculation. Under the University's forgiveness policy, a student must file a Repeated Course Form with the Office of Registration and Records. The form must be submitted no later than one year after the semester in which the grade was received. All courses taken with the grades earned will be recorded on the student's transcript. The repeated course form will not be processed if the first or repeated grade received is 'DR', 'DP', 'WI', 'WP', 'AU', 'NR', or 'EM'. Repeated courses will be appropriately designated (T: attempted; R: last repeat).

Graduate students may repeat no more than two courses under this rule with no course being repeated more than once. The course shall be repeated on a letter grade basis. Only the grade and credit received in the second attempt shall be used in computing the overall GPA. However, the original grade will remain posted on the student's permanent record, but will not be used in computing the overall GPA.

A course taken on a letter grade basis must be repeated on the same basis. A student will not be allowed additional credit or quality points for a repeated course unless the course is specifically designated as repeatable (independent study, studio courses, etc.). If a student is not using the forgiveness policy, he or she may still repeat a course. All attempts will apply to computation of the GPA but credit for one attempt will apply toward graduation. Students must check with the appropriate academic department to determine whether there are additional restrictions on repeating courses.

### Departmental Credit by Examination

Departmental credit by examination is available for certain courses. A student who has already gained knowledge of a subject offered at the University and who wishes to take an examination in lieu of taking the course should discuss the matter with his or her academic advisor and with the department offering the course.

Awarding departmental credit by examination is the prerogative of each academic unit. To receive credit by examination, a student must be a regular degree-seeking student, register, and pay for the courses in the regular manner. Once the student is awarded the Departmental Credit by Examination,

an EM grade will be recorded on the transcript.

### Change or Correction of Grades

Once submitted, end-of-semester grades (except Incompletes and NR's, which default at the end of two terms) are final and are subject to change only through a Change of Grade Form to correct an error in computation or transcribing, or where part of the student's work has been unintentionally overlooked.

### Final Examinations

Final course examinations will be given during the week following the last day of classes during each semester. The Summer semesters do not have final examination periods and course examinations may be given at the discretion of the faculty member teaching the course.

### Grade Reports

At the end of each semester, the Office of Registration and Records mails each registered student a copy of his or her end of term grades.

### Application for Graduation

Each student who plans to graduate is required to submit to the Office of Registration and Records an Application for Graduation form. This form, supplied by the Office of Registration and Records, must be submitted before the end of the third week of classes of the academic semester in which graduation is expected. A student turning in the Application for Graduation after the deadline will graduate the following semester. There is no charge for applying for graduation. The Application for Graduation must be signed by the academic advisor prior to being submitted to the Office of Registration and Records.

A student denied graduation must complete the remaining requirements needed for graduation and must re-apply for graduation.

### Academic Warning, Probation, and Dismissal

#### Warning

A student whose cumulative GPA falls below a 3.0 (graduate) will be placed on warning, indicating academic difficulty.

#### Probation

A student on warning whose cumulative GPA falls below 3.0 (graduate) will be placed on probation, indicating serious academic difficulty. The College/School of the student on probation may appropriately communicate condi-

tions which must be met in order to continue to enroll.

### Dismissal

A student on Probation whose cumulative and semester GPAs fall below a 3.0 (graduate) will be automatically dismissed from his or her program and the University. A graduate student will not be dismissed prior to attempting a minimum of 12 hours of coursework as a graduate student. The student has ten working days to appeal the dismissal decision. This appeal must be made in writing to the Dean of the College or the School in which the student is admitted. The dismissal from the University is for a minimum of one year. After one year, the student may apply for readmission (see Readmission) to the University in the same or a different program, or register as a non-degree seeking student. There are no exceptions to the one year waiting period.

Dismissed students applying for admission or registering as non-degree seeking students are placed on academic probation.

### Student Records

Florida International University assures the confidentiality of student educational records in accordance with State University System rules, state, and federal laws including the Family Educational Rights and Privacy Act of 1974, as amended. Student academic records are maintained in the Office of Registration and Records and in the academic department of the student's major. As a rule, all currently enrolled and former students have the right to review their records to determine their content and accuracy. Parents of dependent students, as defined by the Internal Revenue Code, and who give evidence of the dependent status, have the same rights. For the cost of photocopying, students may generally have copies of any documents in their file, except for other institutions' transcripts.

### Release of Student Information from Educational Records

The disclosure or publication of student information is governed by policies of Florida International University and the Board of Regents of the State University System of Florida within the framework of State and Federal Laws, including the Family Educational Rights and Privacy Act of 1974.

A student's consent is required for the disclosure or publication of any information which is a) personally identifiable and b) a part of the educational

record. However, certain exceptions to that generality, both in types of information which can be disclosed and in access to that information, are allowed within the regulations of the Family Educational Rights and Privacy Act. The following persons and organizations may have access to personally identifiable information without a student's prior consent:

A. Faculty, administrators, staff and consultants employed by the University or the Board of Regents whose work involves:

1. Performance of administrative tasks which relate to students;
2. Performance of supervisory or instructional tasks which relate to students; or
3. Performance of services which benefit students.

A student's prior consent is not required for disclosure of portions of the educational record defined by the institution as Directory Information. The following Directory Information may be released by the University:

1. Name, local and permanent address and telephone number(s);
2. Date and place of birth, and sex;
3. Classification and major and minor fields of study;
4. Participation in officially recognized activities and sports;
5. Weight and height of members of athletic teams;
6. Dates of attendance, degrees and awards received;
7. The most recent previous educational agency or institution attended by the student; and
8. Photographic image.

The information above, designated by the University as Directory Information, may be released or published by the University without a student's prior written consent unless exception is made in writing by the student or the parents of a dependent student.

In order to prevent access to or release of Directory Information, students, or the parents of dependent students, must notify the Registrar (PC 130), in writing, prior to the first class meeting day of the semester. Access to, or release of Directory Information will be withheld until further written instruction is received from a student, or the parents of a dependent student.

Students have a right to challenge the correctness of their educational records and may file written requests to amend these records. The Office of Registration and Records (PC 130) may be contacted for further informa-

tion regarding the procedure to follow in filing complaints.

For complete information regarding the policies outlined above, please contact:

Registrar  
Office Registration & Records  
PC 130  
Florida International University  
University Park  
Miami, Florida 33199

### Transcripts

The transcript is the complete student record of courses taken at the University, in addition to the number of transfer credits accepted. The GPA is calculated for all courses taken at the University after Fall Term 1975 whether the courses are in the major program or not. Once a baccalaureate, master's, or doctorate degree is earned, the GPA recalculation starts again.

A student must request his or her transcript in writing. There is a processing period. The transcript will not be released if the student has a University financial liability. There is a transcript charge of \$5.00 per transcript. (Students will receive the first five transcripts free).

### Class Attendance

The University does not have an attendance policy. However, individual faculty may establish attendance criteria in classes where it is necessary for academic reasons. Academic units may establish their own attendance policies with the approval of the Provost.

### Policy Statement with Reference to Religious Holy Days

A faculty member who wishes to observe a religious holy day shall make arrangements to have another instructor conduct the class in his or her absence, if possible, or shall reschedule the class.

Because there are some classes and other functions where attendance may be considered essential, the following policy is promulgated:

1. Each student shall, upon notifying his or her instructor, be excused from class to observe a religious holy day of his or her faith.
2. While the student will be held responsible for the material covered in his or her absence, each student shall be permitted a reasonable amount of time to make up any work missed.
3. No major test, major class event, or major University activity will be scheduled on a major religious holy day.

4. Professors and University administrators shall in no way penalize students arbitrarily who are absent from academic or social activities because of religious observances.

## Veterans Information

The Office of Veterans Affairs assists all veterans and their dependents who wish to receive VA educational benefits. The Office also provides personal counseling, fee deferments, tutorial assistance, and work-study jobs. The VA Office is located in PC 130, University Park; and in ACI-160, North Miami Campus.

Veterans who are planning to attend the University should contact the Office of Veterans Affairs two months prior to the date of entry in order to expedite the processing of paperwork required to obtain educational allowances from the Veterans Administration.

### Training Status

Full time	9 Credits
3/4 time	7 Credits
1/2 time	5 Credits
Less than 1/2 time	4 Credits

### Rate of Payment

#### Number of Dependents

For rate of monthly payment of educational allowances for veterans and dependents, please contact Office of Veteran's Affairs.

For additional information regarding other Veterans Educational Programs, contact the Office of Veterans Affairs at University Park, PC 130, 348-2838.

## Status Certification

The Veterans Affairs Office also verifies the school status of all past and present students for purposes of Social Security, tuition reimbursement, employment, and loan deferrals.

## Enrollment Status

### Graduate:

Full time: 9 credits or more.

Half time: 6 - 8 credits.

Less than half time: 5 credits or less.

The above enrollment status is for continuous enrollment for the semester that the student is attending. Reduction of course load will reflect the student's status. See certification office for further details.

## Florida Residency Information - Florida Student Definition

For the purpose of assessing registration and tuition fees, a student shall be

classified as a Florida or non-Florida Resident.

To qualify as a Florida Resident, the student must:

1. Be a U.S. Citizen, Resident Alien, parolee, Cuban National, Vietnamese Refugee, or other legal alien so designated by the U.S. Immigration and Naturalization Service.

2. Have established a legal residence in this State and have maintained that legal residence for 12 months immediately prior to the start of the term in which the student is seeking Florida resident classification. The student's residence in Florida must be as a bona fide domiciliary rather than for the purpose of maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education, and should be demonstrated as indicated below (for dependent students as defined by IRS regulations, a parent or guardian must qualify).

3. Submit the following documentation (or in the case of a dependent student, the parent must submit documentation) prior to the last day of registration for the term for which resident status is sought:

a. Documentation establishing legal residence in Florida (this document must be dated at least one year prior to the first day of classes of the term for which resident status is sought). The following documents will be considered in determining legal residence:

(1.) Declaration of Domicile.

(2.) Proof of purchase of a home in Florida which the student occupies as his or her residence.

(3.) Proof that the student has maintained residence in the state for the preceding year (e.g., rent receipts, employment record).

b. Documentation establishing bona fide domicile in Florida which is not temporary or merely incident to enrollment in a Florida institution of higher education. The following documents will be considered evidence of domicile even though no one of these criteria, if taken alone, will be considered conclusive evidence of domicile (these documents must be dated at least one year prior to the first day of classes of the term for which resident status is sought):

(1.) Declaration of Domicile.

(2.) Florida Voter's registration.

(3.) Florida Driver's license.

(4.) Proof of real property ownership in Florida (e.g., deed, tax receipts).

(5.) Employment records or other employment related documentation (e.g., W-2, paycheck receipts), other

than for employment normally provided on a temporary basis to students or other temporary employment.

(6.) Proof of membership in or affiliation with community or state organizations or significant connections to the State.

(7.) Proof of continuous presence in Florida during the period when not enrolled as a student.

(8.) Proof of former domicile in Florida and maintenance of significant connections while absent.

(9.) Proof of reliance upon Florida sources of support.

(10.) Proof of domicile in Florida of family.

(11.) Proof of admission to a licensed practicing profession in Florida.

(12.) Proof of acceptance of permanent employment in Florida.

(13.) Proof of graduation from high school located in Florida.

(14.) Any other factors peculiar to the individual which tend to establish the necessary intent to make Florida a permanent home and that the individual is a bona fide Florida resident, including the age and general circumstances of the individual.

c. No contrary evidence establishing residence elsewhere.

d. Documentation of dependent/independent status (IRS return or affidavit).

A student can also qualify for Florida residency by one or more of the following criteria:

1. Become a legal resident and be married to a person who has been a legal resident for the required 12-month period, or,

2. Be a member of the Armed Forces on active duty stationed in Florida, or a spouse or dependent, or,

3. Be a member of the full-time instructional or administrative staff of a state public school, state community college or state university in Florida, a spouse or dependent, or,

4. Be a dependent and have lived five years with an adult relative who has established legal residence in Florida, or,

5. Be a former student at a public institution of higher education who was properly classified as a resident who re-establishes domiciliary status and re-enrolls within a period of 12 months, or,

6. Make a statement as to the length of residence in Florida and qualification under the above criteria.

## Financial Aid

The University adheres to the philosophy that a student is entitled to a college education regardless of his or her financial condition. The Financial Aid Program at the University includes scholarships, grants, loans, and employment. Instructions on how to apply for financial aid are listed under Application Procedures for Financial Aid. The Financial Aid Office is located in PC 125, University Park, and in ACI-160, North Miami Campus. The phone number for both campuses is 348-2431.

### Loans

**Perkins Loan (formerly NDLS):** This is a federally funded loan in which graduate students are allowed to borrow an aggregate amount of \$18,000 for their graduate studies including any loans received at the undergraduate level.

There is no interest on the loan while the student is enrolled at least part-time. Repayment begins at a 5% interest nine months after the student ceases to enroll at an institution of higher education. Maximum repayment time is 10 years and a minimum payment of \$30 per month is required.

Borrowers who work in specially designated jobs or geographical areas may have part or all of their Perkins Loan repayment obligation canceled. Borrowers also may be eligible to have their payments deferred or postponed for specific periods of time.

*(Refer to Eligibility Criteria section to determine eligibility requirements.)*

**Stafford Student Loan:** This federal loan program enables students to borrow from either a bank, a credit union, a savings and loan association, or other participating lenders to help fund their post-secondary education. For

new borrowers who seek loans for periods of enrollment beginning on or after July 1, 1988, the interest rate is 8% and increases to 10% beginning with the fifth year of repayment. For students who currently have 7% or 9% GSLs, the interest rate on additional loans will continue to be 7% or 9%.

Depending on the student's need, graduate students may borrow up to \$7,500 a year. The aggregate amount that graduates may borrow is \$54,750, including any Stafford loans received at the undergraduate level.

Loan repayments begin six to nine months (depending on the interest rate of the loan) after the student graduates, leaves school, or drops below half-time status.

*(Refer to Eligibility Criteria section to determine eligibility requirements.)*

**PLUS Loans and Supplemental Loans for Students (SLS):** PLUS loans are for parent borrowers; SLS's are for students. Both loans provide additional funds for educational expenses and, like Stafford Student Loans, are made by a lender such as a bank, credit union, savings & loan association, or other participating lenders. SLS and PLUS loans are disbursed on or after July 1, 1988 will have a variable interest rate, adjusted each year. The interest rate for the 92-93 award year will be determined in June 1992.

PLUS enables parents to borrow up to \$4,000 per year, to a total of \$20,000, for each child who is enrolled at least half-time and is a dependent student.

Under the SLS program, graduate students may borrow up to \$4,000 per year, to a total of \$20,000. This amount is in addition to the GSL.

PLUS and SLS borrowers do not have to show need, although like all borrowers, they may have to undergo a

credit analysis. To receive consideration for an SLS, borrowers must apply for financial aid to establish their eligibility for a Stafford Loan.

SLS and PLUS borrowers must begin repaying interest within 60 days after the loan is disbursed, unless the lender agrees to let the interest accumulate until the deferment ends.

**Emergency Loan:** This institutional loan program assists students who demonstrate an urgent need for immediate funds. Applicants must be enrolled as full-time students in the semester for which the request is being made. The amount loaned can be up to \$500 and must be repaid within 90 days. This loan may also be used by financial aid recipients as an advance on their financial aid awards for the purpose of purchasing books.

Applications are available at the Financial Aid Office and loans are approved within 24 hours. Release of funds will occur within five working days of the request.

**Short-Term Tuition Loan:** This is an institutional loan program available to students who are unable to meet the deadline for fee payment.

To be eligible, an applicant must have earned at least 12 credits at the university, be admitted to a degree program, be enrolled on a full-time basis, and have no outstanding debts to the University. Financial aid recipients are not eligible to receive this loan since their tuition/fees payment can be deferred until their financial aid is disbursed.

Applicants who meet all criteria will be awarded the loan. The amount of award is limited to the student's actual cost of in-state tuition and other required fees or a maximum of \$1200 for non-Florida residents. The loan is due 60 days from the first day of classes each semester. (Late registration fees

### 5% Perkins Loans Repayment Chart

Amount Borrowed	Monthly Payments	Total Amount Monthly Payments	Number of Final Payment	Total Interest	Amount Repaid
\$ 500.00	\$ 30.00	18	\$ 9.30	\$ 19.30	\$ 519.30
1,000.00	30.00	36	28.87	78.87	1,078.87
1,500.00	30.00	57	5.54	185.84	1,685.54
2,000.00	30.00	79	7.93	347.93	2,347.93
2,500.00	30.00	103	17.34	577.34	3,077.34
3,000.00	31.82	120	31.77	818.35	3,818.35
4,000.00	42.43	120	41.84	1,091.01	5,099.01
5,000.00	52.03	120	53.06	1,363.63	6,363.63
7,500.00	79.55	120	79.42	2,045.87	9,545.87
10,000.00	106.07	120	105.37	2,727.70	12,727.70
12,000.00	127.28	120	127.06	3,273.38	15,273.38

or other penalty charges are excluded from loan.)

## Student Employment

The University offers employment opportunities through various sources. In addition to the CWS Program which is based on financial need, other jobs are available on and off-campus and assistance in locating work is provided to any student through the Job Location Development Program.

**College Work Study (CWS):** This is a federal financial aid program often included in the student's financial aid award. It provides employment opportunities to eligible graduate students. Students awarded CWS funds may work on-campus, and an effort is made to assign them to jobs related to their field of study or special interests and skills.

(Refer to Eligibility Criteria section to determine eligibility requirements.)

**Job Location Development Program (JLD):** The Career Planning and Placement Office operates a Job Location Development Program to help currently enrolled students in locating off-campus part-time employment.

Students seeking work may contact the JLD coordinator in that office for information and assistance.

**Other Personnel Services (OPS):** On-campus employment opportunities are also available through the University Personnel Relations Department (Employment Office) or through the various University departments.

**Caution:** Financial aid recipients should be aware that all earnings from non-financial aid employment will be considered as a resource for the following academic year.

## Eligibility Criteria

To be eligible to receive Federal assistance, students must:

1. Be enrolled in an eligible program of study;
2. Be U.S. citizens; U.S. nationals; or U.S. permanent residents or reside in the United States for other than a temporary purpose (supportive documentation may be required to verify residency or citizenship status).
3. Maintain satisfactory academic progress in their course of study (Refer to Satisfactory Academic Progress section).
4. Not be in default of any loan or owe a repayment on a Pell Grant, SEOG, or state grant.
5. Demonstrate financial need.

## Other Forms of University Assistance

A number of scholarships are made available by the University, private organizations, or individuals for students with academic promise and financial need. Selection of recipients, award amount, and eligibility criteria are determined by the University, the donor(s), or both.

Application information and deadlines can be obtained through the Financial Aid Office.

## University-Wide Programs

To be considered for a variety of University scholarships, students are required to file a Need Analysis Form (see Application Procedures for Financial Aid).

### Graduate Assistant Matriculation

**Fee Waivers:** These waivers may be awarded to Graduate Assistants who are to be employed for a minimum of 10 hours per week and who are enrolled full time for at least one semester during the academic year.

**Tuition Waivers:** Tuition waivers may be awarded to Non-Florida residents and foreign students to help defray a part or all of the out-of-state portion of their tuition. Awards are made to students who demonstrate high scholastic achievement, or to students who have special skills or talents.

### Graduate Scholarships and Fellowships

Graduate scholarships and assistantships are provided to applicants who demonstrate qualifications required for admission to graduate programs. This financial aid may be available in accordance with various criteria such as: outstanding academic potential and prior achievement, demonstration of financial need, and minority recruitment.

Doctoral fellowships, research assistantships, and teaching assistantships are awarded competitively for doctoral programs in Adult Education, Biology, Business Administration, Community College Teaching, Computer Science, Curriculum and Instruction, Economics, Education, Educational Leadership, Exceptional Student Education, Psychology, and Public Administration. Student aid may be available for other doctoral programs as new programs are established.

Master's degree scholarships, research assistantships, and teaching assistantships are available in numerous programs. Students may also gain part-time employment to support study and living costs. Student financial support is

also provided by external agencies. For example, the Florida Endowment Fund provides doctoral fellowships for students who are Black American citizens.

For more information, contact the individual academic department.

**Fellowship Program for Black Graduate and Professional Students:** Available to black graduate students recommended by their academic departments. Awards are made for Spring or Summer semesters. Contact the Division of Graduate Studies at 348-2455.

## Special Scholarships

**Charles E. Perry Graduate Scholarship:** Available to full time graduate students with a 3.5 GPA or higher and financial need.

**Mickey Dane Memorial Scholarship:** Available to graduates majoring in Industrial Engineering or Business. Must have a minimum 2.5 GPA. Preference given to an airline employee or the son or daughter of an airline employee (on active, retired or furloughed status).

**Felix Memorial Scholarship:** Available to graduate Music majors with financial need. Contact the Music Department at 348-2896.

**Frank R. MacNeill Memorial Scholarship:** Available to U.S. graduate students majoring in Insurance or Marketing with financial need and a 3.0 or higher GPA.

**Isadore Hecht Scholarship:** Available to graduates of Dade or Broward high schools who have completed 10 graduate semester hours towards a degree at the University. The students must be enrolled in the Colleges of Arts and Sciences or Business Administration, or the Schools of Education or Public Affairs and Services. Must be full-time students.

**Judith Seymour Memorial Scholarship:** Available to students enrolled in the College of Arts and Sciences who have completed 30 semester hours at the University and are interested in historic preservation.

**Mayor Henry Milander Public Service Scholarship:** Available to graduate students majoring in Public Administration or Criminal Justice. Must be a graduate of Hialeah, Miami Springs or Miami Lakes high schools to qualify. Must be full-time students, maintain a minimum 3.0 GPA, and have civic leadership qualities.

**Ricardo Nunez Scholarship Fund:** Available to full-time graduate students with good academic progress and financial need and a minimum 3.0 GPA.

**Dr. Pablo Ruiz-Orozco Scholarship:** Available to full-time students seeking graduate degrees in Hispanic Studies who are natives of Ciego de Avila, Cuba, or their descendants. If no students meet this criteria, a student of Cuban origin may be selected. Must have a minimum 3.0 GPA and demonstrate financial need.

**Student Government Association Academic Excellence Scholarship:** Available to full-time students with financial need and a minimum 3.5 GPA.

**Student Government Association Handicapped Student Scholarship:** Available to full-time students with a physical disability, financial need, and a minimum 2.0 GPA.

Other scholarship opportunities are available through individual academic departments. Information about additional externally-funded scholarships is available in the Financial Aid Office.

## Application Procedures For Financial Aid

Listed below are all the documents required to apply for financial assistance, as well as procedures for submission of application. The deadline date to receive priority consideration for available funds is March 15 of the year preceding the academic year of enrollment.

**Need Analysis Document:** Students interested in all forms of aid must complete the Florida Financial Aid Form (FAF) and mail it to College Scholarship Service (CSS). The CSS will perform a need analysis based on the information provided on the FAF and send the results to the University.

**Financial Aid Application (FAA):** This form must be completed by all students and mailed to the Financial Aid Office at their primary campus.

**Financial Aid Transcript (FAT):** All students who have attended another institution of higher education must submit a Financial Aid Transcript for each institution attended, whether or not aid was received.

**Income Tax Return:** Students selected for verification by the U.S. Dept. of Education and students who claim to be independent and are under 24 years of age must submit an official (signed) copy of their (and spouse) previous year Income Tax Return (1040, 1040A, or 1040EZ) to the Financial Aid Office. An official (signed) copy of their parents' tax return will also be required. The applicant's name and social security number should be written at the top of the Parent's Income Tax Form to insure proper student identification. (Stu-

dents and/or parents who did/will not file must submit an Income Certification Statement for IRS Non-Fileers available in the Financial Aid Office.)

**PLUS and SLS Applicants:** A separate application is required in addition to the other documents. The Financial Aid Office will mail PLUS loan applications directly to the student and SLS loan applications to the lender. Unless the applicant specifies a particular lender, he/she must make their own contacts with lenders regarding the completed application.

Additional information may be requested by the Financial Aid Office before issuing an award package.

**Note:** The University will not begin processing financial aid applications until all eligibility criteria are met and application forms are properly completed. It is the student's responsibility to comply with all requirements. All forms and additional information may be obtained from the Financial Aid Office on either campus.

## Notification of Award

Once a need assessment has been completed, a notice of award will be mailed to the applicant.

It is the student's responsibility to review the award and all its conditions prior to accepting the aid offer. The student must then return the signed copy of the award along with all other required documents within 4 weeks of issuance or make an appointment with a financial aid officer to discuss any concerns he/she may have. If the student fails to sign the award offer, the award will be canceled and those funds will be offered to other eligible applicants.

## Disbursement of Aid

All financial aid recipients must go to the Cashier's Office to have their class schedule validated prior to the date shown on the Fee Due Notice received during registration. Failure to validate the class schedule will result in the cancellation of all classes for the semester.

Financial aid checks will generally be available one month after classes begin each semester.

Tuition, fees, housing fees, and other outstanding debts will be deducted before releasing any funds to the student.

## Satisfactory Academic Progress

In keeping with guidelines set by the U.S. Department of Education, the Financial Aid Office must determine if a

student is maintaining satisfactory progress for the receipt of Title IV student financial aid (Pell Grant, Supplemental Educational Opportunity Grant, College Work Study, Perkins Loans, Stafford Student Loan/PLUS Loan, SLS Loan, and State Student Incentive Grant programs). This rule applies regardless of the student's previous financial aid history.

The student must show incremental progress in his or her coursework along the continuum of attendance toward degree completion, as well as remain in good academic standing to be eligible for aid.

Students who fail to meet the satisfactory progress criteria will be placed on probation, or have all aid suspended. If a student disagrees with the Financial Aid Office's decision, he or she will have the right to appeal. (The complete Satisfactory Progress Policy statement is available in the Financial Aid Office and one copy is provided to each financial aid applicant along with the notification of their financial aid eligibility.)

## Financial Aid Refunds/Repayments

When a student receiving financial aid withdraws or drops below the required hours for receipt of that aid, the amount of refund due (according to the University Refund Policy) is refunded back into the financial aid programs from which the student received money. In addition, a portion of the financial aid received as cash disbursement for non-instructional costs must be repaid by the student to the University.

The complete Refund/Repayment Policy Statement and distribution formulas are available in the Financial Aid Office.

## Students' Rights and Responsibilities

As a recipient of financial aid, there are certain rights and responsibilities of which students should be aware. By knowing them, students will be in a better position to make decisions which could influence their educational goals and objectives.

### Students have the right to know:

1. What financial aid programs are available at Florida International University.
2. The process and procedures that must be followed in order to be considered for financial aid.



3. The criteria used in selection of recipients, and the method used for calculating need.

4. The various programs on the financial aid award and how the need was determined.

5. The refund and repayment policy at the University.

6. How the Financial Aid Office makes its determination on such questions as student progress, the appeal process, and other decisions.

7. The terms, including repayment, of any loan allocated by the University.

8. What special facilities and services are available to the handicapped.

#### Students are responsible for:

1. The timely and proper completion of all necessary forms by the established deadlines, and the accuracy of any information provided to the University in the financial aid application.

2. Promptly providing any additional information requested by the Financial Aid Office.

3. Keeping the Financial Aid Office informed of any changes in address, name, marital status, financial situation, or any change in their student status.

4. Reading and understanding all financial aid forms sent to them and/or signed by them and keeping copies of the forms.

5. Notifying the Financial Aid Office of any scholarship, grant, or other resources made available to them from non-University sources while they are receiving financial aid.

6. Notifying the Financial Aid Office if they withdraw from the University or change their enrollment status. Some repayment may be expected on a prorated basis. Future aid may be suspended if arrangements for payment are not made with the Financial Aid Office.

7. Maintaining satisfactory progress in order to be considered for financial aid.

8. Visiting the Cashier's Office for an exit interview if they have received a Perkins Loan or Stafford Student Loan and do not plan to return to school the following semester.

9. Re-applying for aid each year.

## Student Fees and Student Accounts

### Fees

Registration and tuition fees are established by the Board of Regents as required by the Florida Legislature.

These fees are subject to change without notice. The fees for 1991-92 are as follows:

#### Credit Hour Fees

	Florida Resident	Non-Florida Resident
Undergraduate	\$46.81	\$184.76
Graduate, Thesis or Dissertation	\$84.43	\$286.84

#### Student Fees

Athletic	\$10.00	\$10.00
Health	\$27.00	\$27.00

Registration fees for course audits are the same as the above fees, except that no assessment will be made for the out-of-state portion.

A schedule of registration and tuition fees for all programs is published prior to each semester and can be obtained at the Office of Registration and Records. Since fees often change in the fall semester the above fees should be used for information purposes only. The schedule of classes will contain the most accurate fee information.

### Fee Waivers

Students using a fee waiver as part of the fee payment must present the original and the student copy to the Cashier's Office at the time of payment, on or before the last day to pay fees. Students who are responsible for a portion of their fees in addition to the fee waiver will be required to pay their portion before the fee waiver is applied.

University and State employees using the State employee fee waiver to pay their fees must register on or after the day established in the official University calendar for State employee registration. A properly completed and approved waiver form must be presented at the Cashier's Office by the date published for the last day to pay fees. The State employee fee waiver will not be accepted as payment for course registrations prior to the announced date for state employee registration.

Senior citizens fee waivers are available to persons 60 years of age or older who meet the requirements of Florida residency as defined in this catalog. The fee waiver allows qualified individuals to attend credit classes on an audit basis. Senior citizens using

the fee waiver must register during the first week of classes

Florida law requires that State employee fee waivers and senior citizen fee waivers be granted on a space available basis only; therefore, individuals using these waivers must comply with the procedures outlined in the schedule of classes for each semester.

*Refunds will not be processed for employees who have registered and paid prior to the state employee registration day and wish to use the fee waiver.*

### Fee Payment

Fees may be paid at the Cashier's Office at University Park, PC 120, or at North Miami ACI 140. Broward students may pay at the Broward Community College Cashier's Office, by mail or at the Cashier's Office at University Park or North Miami. Night drop boxes outside the Cashier's Offices are available for fee payments by check or money order through the last day to pay fees. Payment is also accepted by mail. The University is not responsible for cash left in the night drop or sent through the mail. Failure to pay fees by the established deadlines will cause all courses to be cancelled. See *Fee Liability* below.

### Late Registration Fee

Students who register or pay after the established deadline for registration will be subject to \$100 late registration fee.

### Late Payment Fee

Students who pay fees after the established deadline for payments will be subject to a \$100 late payment fee. If applicable, this fee may be assessed in addition to the late registration fee described in the preceding section.

### Florida Prepaid Tuition Plan Students

All students planning to register under the Florida Prepaid Tuition Plan must present their FPTP identification card to the University Controller's Office, PC 510 on the University Park Campus or at the Cashier's Office ACI 140, on the North Miami Campus before the published last day to pay fees. The portion of the student fees not covered by the plan must be paid by the student prior to the published last day to pay fees to avoid cancellation of classes.

### Financial Aid Students

All financial aid recipients must come to the Cashier's Office and pay the difference between their financial aid or scholarship awards and their final fee

assessment and have their class schedule validated at the Cashier's Office prior to the published last day to pay fees. Failure to have the schedule validated will result in the cancellation of all classes for the semester. The validation process cannot be handled through the night drop or by mail, but must be done in person.

### Fee Liability

A student is liable for all fees associated with all courses in which he/she is registered at the end of the drop/add period. The fee payment deadline is published in the official University calendar. If fees are not paid in full by the published dates, all courses will be cancelled and any money paid will be lost.

*Registration is not complete until all fees are paid in full.*

### Reinstatement of Classes

Appeals for reinstatement of registration for classes cancelled for fiscal reasons must be filed in writing on the prescribed form with the Cashier's Office by the time specified on the cancellation notice. Each request will be evaluated by the Reinstatement Appeals Committee. Reinstatement will be considered for all classes on the class schedule at the end of the drop/add period. Reinstatement cannot be requested selectively for certain classes. The decision of the committee is final and all reinstatement activity, including fee payment, must be completed prior to the end of the fourth week of classes. All students whose registration has been reinstated will be assessed a late payment fee. If the late registration fee is applicable it will also be assessed.

### Application Fee

A non-refundable fee of \$15 shall accompany each application for admission to the University.

### Vehicle Registration Fee

A non-refundable annual vehicle registration fee is applicable to all persons operating or parking a motor vehicle on both the University Park and North Miami campuses. Upon payment of the applicable fee and registration of the vehicle at the University Public Safety Department each vehicle will be assigned a parking decal which must be permanently affixed on the vehicle. The decal is required for all vehicles parking on campus. Parking and traffic regulations are strictly enforced.

### Other Fees

#### Library Fines

Per book per library hour	.25
Maximum fine per book	\$5.00
Lost book fine	\$35.00

#### Intern Certificate of Participation

Per credit hour	\$4.76
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**Note:** These fees are subject to change as permitted by law. Additional fees may be added and special purpose fees may be assessed in some instances.

### Checks

The University will accept personal checks for amounts due to the University. These checks must be in the exact amount due only. The Cashier's Office will not accept checks above the amount due, third party checks or checks for cash. State law requires that a service fee of \$15 or 5% of the amount of the check (whichever is greater) be assessed on a check returned unpaid by the bank for any reason. Returned checks will be assigned to an agency for collection if not promptly paid. When an account has been assigned the collection agency fee will be added to the University charges for collection at the current contract rate. Returned checks on student accounts will result in cancellation of classes and will require petition for reinstatement. See reinstatement of classes above.

The Cashier's Office will not accept a check on any student's account which has had two previous dishonored checks.

### Refunds

A refund will be made upon written application by the student of all fees, for all courses dropped during the drop/add period.

Students who have completed registration and have paid all fees due and have completely withdrawn from the University prior to the end of the fourth week of classes are eligible for a refund of 25% of total fees paid less the capital improvement and building fees. Refund will be made only upon written application by the student.

In the following exceptional circumstances, a full refund of total fees paid (except the health and athletic fees) will be made upon presentation of the proper documentation:

- Death of a student or immediate family member (parent, spouse, child, or sibling) - Death certificate required.

- Involuntary call to military service - copy of orders required.

- Illness of student of such severity or duration to preclude completion of courses - confirmation by a physician.

Processing of refund applications begins after the end of the drop/add period each semester.

Appeals for tuition refunds must be submitted in writing to the Cashier's office within two years after the end of the term for which the refund is requested. There are no exceptions to this policy.

### Past Due Accounts

Delinquent accounts are sufficient cause to prohibit registration, graduation, release of transcripts, or release of diplomas.

The University is not able to grant credit or time payments for any fees. Financial aid is available to those qualifying through the Financial Aid Office. A limited number of short term loans are available to full time enrolled students who may experience problems in meeting fee payment due dates.

The University reserves the right to assign any past due account to an agency for collection. When an account has been assigned the collection agency fee will be added to the University charges for collection at the current contract rate.

### Deadlines

Students are reminded that deadlines are strictly enforced. The University is not able to grant credit or to extend the fee payment period beyond the time set in its official calendar. The University does not have the authority to waive late fees unless it has been determined that the University is primarily responsible for the delinquency or that extraordinary circumstances warrant such waiver. The University has no authority to extend deadlines for individual students beyond those set by the official calendar.

## Academic Affairs

The Office of Academic Affairs oversees the planning and administration of the instructional programs of the Colleges and Schools of the University. Matters affecting faculty, curriculum, and the development of undergraduate and graduate degree programs fall within its purview. Consequently, both the Office of Undergraduate Studies and the Office of Graduate Studies report to the Office of Academic Affairs.

This office also supervises academic support programs, such as Continuing Education, the Libraries, Instructional Media Services, Sponsored Research and Training, FAU/FIU Joint Center for Environmental and Urban Problems, Latin American and Caribbean Center, Institute for Judaic Studies, Institute for Public Policy and Citizenship Studies, The Art Museum, Multilingual-Multicultural Studies Center, Southeast Florida Center on Aging, and the Women's Studies Center.

Responsible for all the academic units, the chief academic officer is the Provost and Vice President for Academic Affairs. The Provost and Vice President also serves as liaison to the Florida Board of Regents for academic matters. As a member of the University Executive Staff, the Provost and Vice President leads in the overall academic planning and direction of the University.

(For detailed information on the University's academic Centers and Institutes, refer to the Center and Institute Section.)

## Office of Undergraduate Studies

**Fernando Gonzalez-Reigosa**, *Dean*  
**Glenda Belote**, *Associate Dean*  
**Rosa Jones**, *Associate Dean*  
**Joe Wisdom**, *Associate Dean*  
**William Beesting**, *Assistant Dean*

The Office of Undergraduate Studies is responsible for undergraduate program activities that span more than one academic unit. Included in these activities are the Academic Advising Center, offering advising for freshmen, undecided majors, students changing majors, and non-degree seeking students, and monitoring of Core Curriculum and General Education requirements; the University Learning Center, providing CLAST counseling and academic

preparation, national test administration, and assistance in improving academic skills; the Faculty Scholars and Invitational Scholars awards and the University Honors Program; and ROTC. The office is located in DM 366, University Park, 348-2099; and ACI-180, North Miami Campus, 940-5754.

## Office of Graduate Studies

**Richard L. Campbell**, *Dean*  
**Ruben D. Jaen**, *Coordinator*

The Office of Graduate Studies is under the administration of the Dean of Graduate Studies, who reports directly to the Provost and Vice President for Academic Affairs.

The Graduate Dean is assisted by a Coordinator of Graduate Studies, who has responsibility for all requests for candidacy certification, assists with minority student recruitment and admission, and also assists the Dean of Graduate Studies with the divisional matters.

The Office of Graduate Studies is responsible for: the direction and support of all University graduate programs; the development of and compliance with University graduate policy, procedures, and planning; graduate financial aid, acquisition and distribution; University clientele linkages for development support and productivity; graduate program external advisory councils; graduate program review and accreditation; budgetary support and facilities for graduate programs; and planning, development, budgetary support and external resources.

Academic Deans and Department chairs within academic units have the responsibility for detailed operations of all graduate programs.

The Graduate Dean works with the Graduate Council in the formulation of new graduate policies and procedures. The Graduate Council is a subcommittee of the Faculty Senate and consists of members who also represent their respective colleges/schools on the Council. The Graduate Council reviews curricula changes proposed by academic units and endorsed by the University's Curriculum Committee.

Another committee in the Office of Graduate Studies is the Advisory Committee for Graduate Studies. This Committee makes recommendations to the Graduate Dean on the implementation of graduate policies and procedures on all programs that offer graduate degrees. The Dean of Graduate

Studies serves as Chair of this Committee. Generally, the members on this Committee are assistant and associate deans who have responsibility for graduate education in their respective academic units.

Human Research Committee. Dr. K. Galen Kroeck, Professor of Management, Chairs the University Research Council which, among other things, is in charge of making decisions and giving approval to the use of human subjects on projects and research conducted by University professors and students. In addition, the Committee makes recommendations for fostering University wide research productivity.

Graduate students seeking information on general graduate policies and procedures, or instructions on preparing and filing the thesis or dissertation, should contact the Office of Graduate Studies in PC 520, University Park, or call 348-2455 for an appointment.

## Libraries

The University Libraries are housed in the Athenaeum (AT) at University Park, and in a new Library building (LIB) on the North Miami Campus.

The total library collection comprises almost a million volumes, in addition to substantial holdings of federal, state, local, and international documents; maps; microforms; music scores; newspapers; institutional archives; and curriculum materials. The Library subscribes to 7,025 scholarly journals and other serials.

A computerized catalog of library holdings provides a listing of materials in both FIU Libraries, and other libraries in the State University System. The bulk of the collection is housed in open stacks.

Classification of library resources is according to the Library of Congress system, except for some of the documents and special collections (e.g., U.S., Florida, and U.N. documents, archives, etc.) which are arranged by their own classification systems and have separate public catalogs.

In keeping with the University's commitment to day and night operation, the libraries are open when the University is in session and during vacation periods. For exact library hours, please consult the posted schedules. Staff members are always available at the Public Service desks to assist students and faculty in their use of the library.

### Consortium Library Privileges

Currently registered students, faculty, and staff may use the libraries of any of

the other campuses of the State University System. For access to libraries in the southeast Florida region, students, faculty and staff should consult with members of the Library staff.

A state-of-the-art system of inter-library loan links the libraries with others throughout North America. It includes the use of telefacsimile for time-critical requests.

## Instructional Media Services

Instructional Media Services specializes in the development, production, and utilization of various types of audiovisual and communication media for educational purposes. The services offered are listed below. (an asterisk indicates services available to students):

**The Production Centers<sup>1</sup>** are do-it-yourself media and graphic arts production labs, providing technical assistance to faculty, staff and students in the creation of visual aids such as slides, overheads, flyers, posters and charts for classroom presentations, papers or projects. Professional help and instruction is available on the premises in the use of Macintosh computers, letter machines, copystand cameras, overhead-makers, laminators, etc. While consumable items such as films, poster-board and transparencies are to be provided by students, there is no fee for either the help provided or the use of the facilities. (AT-134 at University Park; LIB-150 at North Miami).

**Photography Services** provides still photographic support and services to faculty and staff for educational, training and informational purposes. (AT-139 at University Park; services available to all FIU campuses).

**Instructional Graphics** prepares artwork, graphs, illustrations, charts and posters for faculty and staff. (AT-135 at University Park; serves other campuses through fax and inter-office mail).

**Instructional Television Production** produces instructional media programs (video and audio recordings, both in-studio and remote, teleconferencing, and multi-media programs) for faculty and staff. (VH-245 at University Park; services available to all FIU campuses).

**Equipment Distribution and Scheduling<sup>1</sup>** provides a large variety of educational audiovisual equipment for use by faculty and staff. Services are available to students for classroom use and when sponsored by professors. (PC-

236 at University Park; ACI-193 at North Miami Campus).

<sup>1</sup>(These services are available to students, as well as faculty and staff.)

Other services available are consultation on the purchase, rental, and installation of audiovisual equipment; the rental of films for classroom viewings; and professional guidance on a wide range of audiovisual instructional topics and technology. For more information, contact 348-2811, AT-136, University Park; or 940-5929, LIB-150, North Miami Campus.

### Consortium Media Privileges

Faculty, staff and students can use the audiovisual services on any campus of the Consortium. AV materials and equipment cannot be borrowed.

## Continuing Education

**Carolann W. Baldyga, Dean**

**Doris K. Sadoff, Assistant Dean**

**J. Patrick Wagner, Director,**

*Off-Campus and Weekend Credit Courses*

**Karl L. Rodabaugh, Director,**

*Conferences and Short Courses*

The University extends credit and non-credit learning opportunities through the Division of Continuing Education. Courses of instruction are developed and offered in a variety of formats. These include conferences, seminars, short courses, workshops, lecture series, certificate programs and courses for academic credit. Learning opportunities are made available at locations throughout Dade, Broward and Monroe counties, the University's campuses and abroad through special arrangements. Instruction can be designed to serve specific needs and respond to requests from community groups, professional organizations, businesses and industry.

The Division's central office is located in ACI-100, North Miami Campus, 940-5669. Offices and services are also available in PC 245, University Park, 348-2490.

Administered through the Office of Academic Affairs, the Division of Continuing Education carries out the following programs: Off-Campus and Weekend Credit Courses and Conferences and Short Courses.

### Off Campus and Weekend Credit Courses

Over 230 courses for academic credit are offered off-campus and on weekends each year through the University's eight Colleges and Schools. Any course listed in the University Catalog may be conducted at a suitable location in Dade, Broward or Monroe counties. Courses are regularly conducted at hospitals, banks, community schools, and other public and private facilities appropriate for educational delivery. An individual, business, agency or association can request that a specific course or degree program be offered.

Registration for Continuing Education credit courses may be accomplished at the office of Registration and Records at University Park and North Miami Campus, and the University's Broward Community College, Central Campus office. Students may also register at the first class meeting.

Sponsored Credit Institutes are contract agreements through which an employer, public agency, or professional organization collaborates with the University to provide credit courses and degree programs for its constituents. These educational enhancement benefits are arranged to serve the needs of a designated group of individuals at a location and time convenient to them.

For information on how to request a course or to find out more about educational opportunities available through the Department, call 940-5653 in Dade, and 463-2790 in Broward.

### Conferences and Short Courses

Noncredit programs to develop professional competence, increase business skills, and provide personal enrichment are offered through short courses, workshops, seminars, and certificate programs. Local, regional, national and international conferences are coordinated in conjunction with the University's goals and objectives.

Continuing Education Units applicable to professional licensing requirements are available in appropriate programs.

Noncredit program information is published each semester by the Division and may be requested at the Division's offices at University Park and North Miami Campus, or by telephone, 940-5669 (Dade and Monroe), 463-2790 (Broward). Registration is initiated by mail, at the above locations, or at the first session of each program on a space available basis.

### Certificate Programs

#### Legal Certificate Programs

Included are the Legal Assistant (Paralegal), Advanced Legal Assistant Studies, Legal Certification Review, Legal

Secretarial Studies, and Law Office Administration. The objective of all programs is to develop occupational competence through practical and substantive instruction.

### Legal Assistant Certificate

The Legal Assistant curriculum consists of core courses which meet in the evenings supplemented by monthly Saturday seminars, and an intensive program which meets only on Saturdays. Practitioners completing a course or seminar may request CLA continuing education units from the National Association of Legal Assistants.

### Continuing Legal Education for Attorneys (CLER)

Seminars focusing on substantive and nonsubstantive topics, approved by the Florida Bar Association for CLER credit are presented in half-day or full-day format. Instructors are University faculty, and professionals in various disciplines.

### Professional Education for Realtors and Brokers

Issues of current interest to real estate professionals are presented in seminars approved by the Florida Real Estate Commission (FREC) for continuing education credit.

### Certificate for Professional Travel Agents

This comprehensive six-month course develops skills required in the transportation industry with emphasis on the travel agency profession. The program offers a combination of academic exercise, practical application, and on-the-job training to develop desired qualifications. Certain phases of the program are highlighted by field trips to provide firsthand knowledge of travel industry suppliers.

### Video Production Certificate

In conjunction with the School of Journalism and Mass Communication, the Division offers the Certificate in Video Production. Hands-on exercises lead students through all major phases of video production. The program provides preparation for the fields of broadcast, instructional video, corporate video, and applications in advertising and public relations.

### Marketing Communication Certificate

Marketing Communication is designed for individuals who seek a career or wish to develop specific skills for current or prospective employment in the field.

Designed for marketing support staff, designers wishing to expand their base of knowledge, employees assigned to MARCOM tasks, home and small business owners who need greater proficiency in these areas, and government and non-profit employees who are communicating with the public. The courses cover writing well at work, graphic design and marketing strategies. Any of the courses may be taken for regular continuing education units.

This certificate program recognizes that students come from varying backgrounds, it is organized to help strengthen specific areas of expertise.

### Independent Study by Correspondence

The State University System offers a program of over 140 courses with instructors drawn from the University of Florida, Florida State University, and the University of South Florida. The program is administered by the Department of Independent Study by Correspondence, University of Florida, 1938 West University Avenue, Gainesville, Florida 32603, (904) 392-1711.

## Sponsored Research and Training

**Thomas A. Breslin, Vice Provost and Director**

**Catherine F. Thurman, Associate Director**

The Division of Sponsored Research and Training serves the research and training needs of interested faculty by providing timely information on the availability of local, state, and federal program support. The attraction of these funds to the campus provides an opportunity to better serve the needs of the people of Florida through services not regularly funded by the Legislature.

Among the major goals of the Division of Sponsored Research and Training are the following: to help stimulate faculty and staff interest in research and training projects; to assist the faculty and staff in obtaining funds for research and training projects; and to provide technical assistance to faculty and staff who manage contract and grant programs for the University. For more information, contact 348-2494.

## The Art Museum

**Dahlia Morgan, Director**

The Art Museum of the University has served the South Florida community for the last seven years exhibiting shows of local and national importance. Exhibitions from outside the University and the area are intended to display the finest available and affordable examples of contemporary and historical art. These shows are obtained from a variety of sources, primarily professional organizations and lending institutions, individual artists, commercial galleries, and other educational institutions.

The types of exhibitions displayed directly benefit not only the University community, but also the public. Attendance records show that approximately 200 people per day visit the facility and come from Dade, Broward, Palm Beach, and Monroe counties, for the most part. The Museum is open six days a week and one evening.

The Art Museum, which occupies a 4,000 square foot area on the University Park, opened with an internationally acclaimed exhibition of Contemporary Latin American Drawings in April, 1977. Since that date many exhibitions have been displayed including: Alberto Giacometti, Draftsman and Sculptor; The Textology Series of Jean Dubuffet; Public Relations: Photographs by Garry Winogrand; Mira, Mira, Mira, Los Cubanos de Miami; Alfred Stieglitz, 1894-1934; William Wiley; A Collector's Eye: The Olga Hirschhorn Collection; Miriam Shapiro, A Retrospective: 1953-1980; Neil Welliver; Treasures of the Norton Gallery; Manuel Neri; Realist Watercolors; English Naive Painting; Michael Graves Exhibition; Marsden Hartley Exhibition; Anxious Interiors; American Art Today: Still Life; and nationally acclaimed Marcel Duchamp Exhibition.

The Museum has continued to enhance its exhibition program with a lecture series which has included many of the exhibiting artists and scholars, museum curators, and others who have been involved with the particular exhibition. The highly-acclaimed Critic's Lecture Series, sponsored by the Museum, has included: Germaine Greer, Robert Hughes, John Cage, Tom Wolfe, Carter Ratcliff, Susan Sontag, Linda Nochlin, John Canaday, John Simon, and Michael Graves.

The Museum is operated by the Director, the Coordinator of University Collections, and a staff made up partially of University students working through an internship program.

## Student Affairs

The mission of the Division of Student Affairs is to contribute to the total educational process of students by creating a learning environment which fosters personal growth and development; promotes cultural diversity; provides programs and services which enhance intellectual, social, cultural, physical, emotional, and spiritual development; and prepares students to become contributing members of the community.

The Division is comprised of the following departments and programs: Campus Ministry, Career Planning and Placement, Disabled Student Services, Greek Organizations, Intercollegiate Athletics, International Student Services, Minority Student Services, Orientation, Precollegiate Programs, Public Safety, Student Activities, Student Counseling, Student Government, Student Health Services, Student Judicial Affairs, University Centers, and University Housing.

Student Affairs offices are located at University Park in Graham Center, the first floor of PC, the Golden Panther Arena and the Modular Building on the west side of campus. On the North Miami Campus, offices are located in the Student Center Building, the Trade Center, and the third floor of the Library.

## Campus Ministry

The Interfaith Campus Ministry serves student groups involved in a variety of activities. Professional representatives from various faiths are available for personal appointments. Individual denominations sponsor campus-wide programs including worship, study groups, social gatherings, and cultural events. In addition, Campus Ministry sponsors programs and activities which are non-denominational.

Location: GC 340, University Park, 348-2215; SC 265, North Miami Campus, 940-5609 or 940-5610.

## Career Planning and Placement

Career Planning and Placement (CP&P) assists students with the identification of their skills, values and interests and provides the necessary tools for on-going self assessment. CP&P provides five services: Career Advice, Career Mentoring Programs, Cooperative Education, Career Placement

and the Job Location and Development Program. Through these services students and alumni learn up-to-date information about the world of work, career/major choices, occupational trends, career options, and job search techniques.

Cooperative Education allows students to combine classroom theory with career related practical work experience. Students work in professional training positions related to their major field of study and earn both a salary and academic credits.

CP&P hosts numerous workshops and seminars, schedules on-campus interviews, operates a resume referral system, and lists job vacancy notices for part-time, full-time, and summer employment. It also houses a comprehensive career library, and a computerized career guidance system. The office provides evening hours at University Park.

Location: GC 230, University Park, 348-2423; SC 260, North Miami Campus, 940-5813 Trailers, Broward Program, 474-1404.

## Disabled Student Services

Disabled Student Services provides information and assistance to students with disabilities who are in need of special accommodations. Individual services are available to students with visual, hearing, speech, physical, and learning disabilities, chronic health problems, psychological disorders, and temporary disabilities. Services include counseling, classroom accommodations, adapted equipment, note-takers, readers, interpreters, adapted testing, priority registration, and referrals. Support and assistance in overcoming architectural, academic, attitudinal, and other barriers encountered is provided. Requests for services must be made prior to the beginning of each semester and current documentation of disability is required to receive services.

Location: GC 231, University Park, 348-3532; SC 259, North Miami Campus, 940-5813; Bldg. 9, Room 224, Broward Program, 948-6793.

## Greek Organizations

Greek organizations contribute to the University by promoting leadership, scholarship, service, social activities and brotherhood and sisterhood. There are eight fraternities and five sororities

coordinated by a Greek Council. An Interfraternity Council governs fraternities and a Panhellenic Council governs sororities. In addition, the Order of Omega, an honorary and leadership society promotes scholarship among Greeks. A formal rush period is held in the Fall semester, and an informal rush is held during the Spring semester.

Location: GC 219, University Park, 348-2950.

## Intercollegiate Athletics

FIU is a member of the National Collegiate Athletic Association (NCAA), and the Trans America Athletic Conference (TAAC) for men. The University has competed at the Division I-AA level since September of 1987, having competed successfully at the Division II level since 1972. Programs and services in Intercollegiate Athletics provide an opportunity for student-athletes to develop as skilled performers in an educational setting. Much emphasis is placed on the student as student-athlete to ensure intellectual, emotional and social well-being.

### Athletics

Athletic team membership is open to all full-time students. Women's programs consist of basketball, volleyball, soccer, golf, tennis, track and cross country. Men's programs consist of basketball, soccer, baseball, golf, tennis, track and cross country. To be eligible for intercollegiate competition, the University requires each student-athlete to be in good academic standing and make satisfactory progress towards a degree. Team membership is determined in a manner which does not discriminate based on race, sex, national origin, marital status, age or handicap.

Financial assistance is available to both freshmen and transfer students recruited for all 14 athletic teams. Assistance may include grants, scholarships, loans or self-help programs. To be eligible for financial assistance, each student-athlete must be in good academic standing and make satisfactory progress towards a degree.

### Campus Recreation

Campus Recreation provides a variety of intramural sports and recreation activities designed to educate, improve physical fitness, develop an appreciation for the value of physical exercise, and extend leisure time skills. The department manages open recreation

and physical fitness facilities, and coordinates intramural leagues, club sports and special events.

Active sport clubs include Crew, Scuba, Fencing, Softball, Rugby and Badminton. Fifteen intramural sports include bowling, basketball, flag football, golf, soccer, softball, co-recreational softball, volleyball, tennis, racquetball, floor hockey, wallyball, and whiffleball. Events such as power-lifting competitions, golf, soccer, racquetball and tennis tournaments, deep sea fishing trips, and other recreation interests are featured each semester.

Campus Recreation also offers non-credit classes in a variety of subjects.

### Athletic and Recreational Facilities

The Golden Panther Arena is a multipurpose facility which serves as the base for University programs in physical education, athletics, and recreation. The Arena has a seating capacity of 5,000. It contains racquetball courts, basketball courts, an auxiliary court area, and meeting rooms. The arena is open to students, faculty, staff, and alumni with valid University identification cards. FIU students are admitted to all regular season home athletic events free of charge upon presentation of a valid University identification card.

The Baseball and Soccer Fields are lighted and each have a seating capacity for 1,500 spectators.

Fitness Centers at University Park and North Miami campuses are equipped with a complete line of Nautilus machines and locker rooms. The Centers are available at no cost to currently enrolled students with valid identification cards. There is a \$40 semester fee for faculty, staff, and alumni.

The Aquatic Center on the North Miami Campus overlooks the bay and is fully furnished to provide an environment for conversation, study and/or sun-bathing. The multipurpose design of the 50 meter x 25 yard pool and diving well allow for recreational and instructional use.

The Racquet Sports Center at University Park has 12 lighted tennis courts and eight lighted racquetball courts. The Racquet Sports Center at North Campus has six lighted tennis courts, a sand volleyball court, and two full-sized basketball courts.

For additional information or hours of operation call:

Campus Recreation: 348-2951  
University Park, 948-4571 North Miami,

Fitness Center: 348-2575, University Park; 940-5678, North Miami Campus.

Golden Panther Arena: 348-2900.  
Racquet Sports Center: 348-2763, University Park; 948-4572, North Miami Campus.

Aquatic Center: 948-4595.

## International Student Services

International Student Services provides assistance on matters regarding immigration regulations and procedures related to non-immigrant legal status.

The staff also provides counseling and advisement on academic, personal and financial concerns, and serves as a liaison to academic and administrative departments throughout the University. An orientation program is offered each semester as well as international and inter-cultural programs to assist students in adapting more effectively to the University community and to living in Miami.

An active International Student Club collaborates with the department in organizing various social activities. Club programs enable students to participate in the international dimension of the University and provide opportunities for involvement in the greater Miami educational community.

Location: GC 217, University Park, 348-2421; SC 260, North Miami Campus, 940-5813.

## Minority Student Services

Minority Student Services provides minority students with personal, academic, social, and cultural support needed for the achievement of educational goals. Staff provides orientation, leadership development, counseling, career and academic advisement, financial assistance and tutorial services; and serves as a liaison to academic units and student support services university wide. This department also collaborates with student groups in coordinating traditional cultural celebrations, and other activities for minority students' physical, mental and social well-being.

Location: GC 216, University Park, 348-2436; SC 260, North Miami Campus, 940-5817.

## Orientation

The Orientation program is designed to assist new students in understanding all aspects of the University environment.

New freshmen and transfer students are strongly urged to attend an orientation program before their first term of enrollment. Several orientation sessions are scheduled each Summer Term and at least one session is offered before Spring and Summer Terms. Information about the orientation program and related services is mailed to newly admitted undergraduate students.

Location: GC 340, University Park, 348-3828, UC 363, North Miami, 940-5804.

## Precollegiate Programs

Precollegiate Programs provides academic enrichment, career planning and scholarship opportunities to promising minority students at the high school level. Pre-collegiate programs also expose high school students to the university environment and facilitate their transition to college.

Location: GC 216, University Park, 348-2436.

## Public Safety

Public Safety is a full service Public Safety organization dedicated to the maintenance of an environment conducive to living and learning in a University community. The department's members include Law Enforcement officers who are fully certified and sworn and its members have full police authority to enforce state and local laws and University regulations.

Public Safety also enforces University Parking Rules and Regulations. A parking decal or permit is required in order to park any vehicle (including motorcycles, motorbikes, and mopeds) on campus. Decals may be purchased in the Cashier's office, or in Public Safety if paid by check or money order. A receipt will be issued which must be presented at Public Safety along with a copy of the current vehicle registration. After the vehicle is registered a decal will be issued. The entire decal (uncut and unaltered) must be permanently affixed to the vehicle at the designated location. All regulations are strictly enforced. For more specific information

please refer to the University Parking Rules and Regulations brochure available on either campus.

Location: Tower, University Park, 348-2626 (Information), 348-2911 (Emergency); SO I, North Miami Campus, 940-5555 (Information), 940-5911 (Emergency).

## Student Activities

Student Activities provides learning opportunities in which students can practice and develop leadership, communication, problem-solving, program planning, organization, implementation, and evaluation skills. Activities are co-curricular and cover all aspects of the educational experience. Over 125 registered student organizations exist to enrich campus life and contribute to the social, cultural, and academic growth of students. Students may organize additional groups that promote the University's educational mission.

This unit also serves as a resource for commuter students. The Commuter Student Program collaborates with academic, administrative, and student affairs units to provide resources, services, and inter-agency and community referrals.

Various informational materials are published and distributed on housing rental practices, landlord/tenant regulations, and other campus resources for commuter students.

Location: GC 340, University Park, 348-2137; SC 363, North Miami Campus, 940-5804; Modular 12.1 Broward Program, 355-5280.

## Student Counseling Services

Student Counseling Services focus on enhancing the emotional well-being of students. A variety of individual and group services are offered, including career/lifestyle counseling, workshops on mental health and wellness issues, and personal counseling for problems associated with anxiety, depression, interpersonal relationships, coping skills and feelings of inadequacy.

Counseling Services also offers a structured, supervised training program for graduate level students who seek exposure to a diversified population within a multi-disciplinary setting. All services are provided to students free of charge. Complete confidentiality is assured.

Location: GC 211A, University Park, 348-2434; SC 260, North Miami Campus, 940-5813.

## Student Government Association

The Student Government Association (SGA) is comprised of representatives from all Schools and Colleges who are elected by the student body. SGA appropriates an annual budget generated by the Activity and Service fee which is paid by all students at the time of registration. Bills, appropriations, and resolutions come before the SGA for discussion, support, funding, or other action on matters related to various activities, issues or causes.

SGA members represent the student body on university-wide committees and task forces to ensure student representation at the administrative level. Students are encouraged to become involved in all aspects of Student Government.

Location: GC 311, University Park, 348-2121; SC 363, North Miami Campus, 940-5680; Modular 12.1, Broward Program, 355-5280.

## Student Health Center

The Student Health Center provides accessible primary health care resources to enable students to maintain a positive state of health. The department holistic promotes health education, wellness programs and preventive medicine. The Health Center stimulates student awareness of health behaviors which may be integrated into lifestyle practices for future health and wellness.

Services include routine medical care; physical examinations, family planning, diagnosis and treatment, screening, laboratory testing and private consultations with a physician or nurse practitioner. Referrals are made to local hospitals, pharmacies, and physicians for services not provided. Appointments are required. In case of an emergency on campus, Public Safety may be called 24 hours a day.

Office visits are free to students who present a valid identification card. Laboratory and pharmacy services are provided for a nominal fee. The University strongly recommends the purchase of student health insurance. Brochures describing insurance coverage in detail are available at the Student Health Center on both campuses.

Please see the Student Handbook for more detailed information on Student Health Services.

Location: Student Health Center, University Park 348-2401; HM 110, North Miami Campus, 940-5620.

## Student Judicial Affairs

The Office of Student Judicial Affairs is established to ensure that the policies and procedures regarding student rights and responsibilities and the Code of Conduct which supports these rights, can be freely exercised by each student without interference by others.

As members of the University community, students are expected to honor and abide by the policies and regulations of the University and the Florida Board of Regents as well as Federal and State laws and local ordinances.

Infringements of an academic nature, should be directed to the Office of the Provost. All other complaints that are non-academic should be directed to Judicial Affairs. The University reserves the right to review the case of any student who has been implicated in a criminal offense prior to admission, to determine the student's eligibility for admission and participation in extracurricular activities.

The "Student Handbook" provides specific information regarding the "Student Code of Conduct." Location: SC 260, North Miami Campus, 940-5817.

## University Center

The University Center on each campus provide direct services to students and the University community. The Graham Center (GC) at University Park, and the University Center (UC) at North Miami are the focal points for the University community to meet and interact in a non-classroom, educational environment. As the hub of student life, the buildings house the Student Government offices, the Beacon Student Newspaper, the bookstore, cafeteria, grill, Ticketmaster, vending machines, automatic banking facilities, lounges, meeting rooms, and a gameroom. The UC also houses a post office and theatre, and GC houses a radio station, auditoriums, computer lab, ballroom, and an overnight lodging facility.

Both student unions also house services provided by the Division of Student Affairs (Career Planning & Placement, Counseling Services, Disabled Student Services, International



Student Services, Minority Student Services, and Student Activities).

Other services include Lost and Found, locker rental, vending refunds, test preparation courses, and student identification card distribution.

Staff in the unions also coordinate the scheduling of space and assist with the production of Student and university-sponsored events.

Location: GC 104, University Park 348-2297; UC 125, North Miami Campus, 940-5800.

## University Housing

Apartment style housing is available for single and married, undergraduate and graduate students on both campuses. Services and programs are designed to be responsive to student needs and support the educational goals of the University.

The residential environment provides an opportunity to meet and to interact with others in ways that encourage intellectual, social and personal growth, and increase awareness of the rich cultural diversity within the University. Students residing on campus have ready access to academic and recreational facilities.

Cooking and refrigeration appliances are provided in each room, however a meal plan may be purchased through the cafeteria on either campus.

All housing is assigned on a space available basis without regard to race, ethnic origin, or religious preference. Modified space is available to students with physical disabilities. An academic year contract is issued for the Fall and Spring semesters. Summer housing is available. For further information and rates, write the University Housing Office, H-101, FIU, University Park, Miami, Florida, 33199.

Location: H-101, University Park, 348-4190; Residence Hall Lobby, North Miami Campus, 940-5587.

## Business and Finance

The Division of Business and Finance comprises the offices of Personnel, Equal Opportunity Programs, Facilities Management, Physical Plant, Controller, Purchasing, Environmental & Safety, Legal Affairs, and Staff Development and Training.

## Equal Opportunity Programs

The office provides leadership and direction in the administration of the University equalization programs for women and minorities in several ways. It assists University units in implementing and monitoring affirmative action procedures; provides a channel for employee and student grievances regarding discrimination, or issues indicating a need for additional affirmative action; administers implementation of the Policy to Prohibit Sexual Harassment; and promotes effective relationships between the University and community organizations. The Office also administers the State University System Scholarship Program. In addition, the Office maintains a liaison relationship with State and Federal agencies dealing with EEO and affirmative action. The Office is located on the University Park in PC 215.

### Florida Educational Equity Act

The Florida Educational Equity Act was passed by the State Legislature in 1984, and prohibits discrimination on the basis of race, sex, national origin, marital status, or handicap against a student or employee in the State System of Public Education. Procedures for implementing the Act have been developed, and the University prepares an annual report to ensure compliance with the Act. The Director of the Office of Equal Opportunity Programs is the University's Coordinator of Institutional Compliance with the Educational Equity Act. A copy of the Education Equity Act Plan is available for review in the Office of Equal Opportunity Programs. This Office has the responsibility for implementing a comprehensive grievance/complaint procedure for students, applicants, and staff who believe they have been treated inequitably based on race, sex, national origin, marital status, or handicap. Such grievances/complaints should be lodged

with this Office in PC 215, University Park.

## AIDS Policy

Students and employees of the University who may become infected with the AIDS virus will not be excluded from enrollment or employment or restricted in their access to University services or facilities unless individual medically-based judgments establish that exclusion or restriction is necessary to the welfare of the individual or of other members of the University community. The University has established an AIDS Committee which includes representation from major University divisions and other University staff as appropriate. The Committee, which will meet regularly, is responsible for monitoring developments with regard to AIDS, acting upon and administering the University's Policy on AIDS in specific cases, and coordinating the University's efforts in educating the University community on the nature of the disease. In addition, the Committee will meet as needed to consider individual occurrences of the disease which require University action.

Persons who know or suspect they are sero-positive are expected to seek expert medical advice and are obligated, ethically and legally, to conduct themselves responsibly for the protection of others.

The University has designated AIDS counselors who are available to provide further information on this subject. Contact one of the following offices at University Park, Director, Office of Equal Opportunity Programs, PC 215; Counseling Services, GC 340; and Student Health Services, OE 115; and on North Miami Campus, Counseling Services, SC 261, or Student Health Clinic, TC 110.

## Sexual Harassment/ Educational Equity

All members of the University community are entitled to study and work in an atmosphere free from illegal discrimination. Florida International University's equal opportunity policies prohibit discrimination against students and employees on the basis of their race, color, creed, age, handicap, sex (including sexual harassment), religion, marital status, or natural origin. Under the policies, it does not matter whether the discrimination was intended or not; rather the focus is on whether students or employees have been treated differently or subjected to an intimidating, hostile or offensive environment as a re-

sult of their belonging to a protected class or having a protected status. Illegal sexual harassment includes unwelcome physical contact of a sexual nature, overt or implied threats to induce performance of sexual favors, verbal harassment, use of sexually suggestive terms, or display or posting of sexually offensive pictures.

Any employee, applicant, or student who believes that he or she may be the victim of unlawful discrimination may file a complaint with the Office of Equal Opportunity Programs, PC 215, University Park (348-2785) in accordance with the procedure.

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## Internal Management Auditing

The basic function of the Internal Management Auditing department is to assist all levels of management in carrying out their responsibilities by furnishing them with independent appraisals, recommendations and pertinent comments concerning the activities reviewed.

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## Auxiliary Services

Auxiliary Services supervises the bookstore and food service operations at both the University Park and the North Miami Campuses, including the Cafeteria, Rathskeller and all vending operations.

Auxiliary Services also supervises the Duplicating Services which includes a Print Shop, Convenience Copiers and a Total Copy Reproduction Center.

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## Controller's Office

This area is primarily responsible for maintaining accounting records, controlling budgets, coordinating financial activities and reporting on financial data. Typical functions of the Controller's Office are the payment of Invoices to vendors, collection of fees and other revenues, payroll, disbursement and collection of student loans and the reconciliation of accounting ledgers.

The Controller's Office is a service oriented unit assisting the University community in most aspects of financial operations. Questions concerning the use of State funds, internal control procedures or methods to pay a vendor or employee are normally addressed to this unit. Guidance is provided to travelers pertaining to the State require-

ments for the reimbursement of travel expenses. Assistance is provided to employees in the interpretation of accounting ledgers and fiscal reports.

The following sections operate within the Controller's Office: General Accounting, Accounts Payable, Travel, Construction Accounting, Contracts and Grants, Disbursement, Student Loan Receivable, Payroll and the Cashier's Office.

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## Environmental Health and Safety

The Environmental Health and Safety Department are responsible for compliance with all federal, state, and local environmental, safety, fire, and radiation control regulations. With the exception of employee health and life insurance, the office also handles all university insurance. This department coordinates with the other university department to control all losses.

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## Facilities Management

The Physical Planning department is responsible for the direction of University long-range capital programming, facilities, and campus planning. These activities include capital budgeting, building programs, design coordination, construction management, and furnishing and occupancy coordination. The department is also responsible for space assignment and management, as staff to the University Space Committee, coordinating all standards and requirements related to facilities and site planning of all campuses.

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## Legal Affairs

Legal services are provided to the university under a contract with the law firm of Valdea-Faule, Cobb, Petrey, and Bischoff. The Office of Legal Affairs provides representation and advice to university administrators, faculty and staff concerning legal issues affecting the university.

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## Human Resources/Personnel

The Office of Personnel Relations provides human resource management services for personnel of all academic and administrative departments on the

University Park, North Miami and Broward Campuses. Categories of personnel who receive services are faculty, administrators, staff and student employees (including research or graduate assistants, college work study students, and student OPS employees). All services provided by the office are in compliance with applicable federal and state regulations, and include six major human resource management areas - Employment and Recruitment, Employee Training and Development, Employee Classification and Pay, Employee Benefits, Employee/Personnel Records, and Employee/Labor Relations.

The University Park office is located in PC 224, 348-2181; the North Miami Campus office is located in Library 322-A, 940-5545.

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## Purchasing Services

Purchasing Services is responsible for a number of functions in addition to the primary function of centralized university purchasing. These other functions include Central Stores, Central Receiving, Property Control, Surplus Property, and Campus Mail. This same organization structure has been in operation since the university opened in 1972. Most key positions are filled with personnel with over 10 years of service in their units. The stability of personnel as well as the high level of cooperation between the related units of purchasing help to better serve the university.

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## Physical Plant

The Physical Plant Department at University Park and North Miami Campus is responsible for the operation, maintenance, and repair of all university buildings, utilities systems, grounds, roads, and parking lots. The university's well known energy conservation strategy and work effort was conceived, reviewed, modified, and executed within the Physical Plant department.

## North Miami, Budget, and Support Services

### Admissions

Admissions is responsible for the recruitment and admission of undergraduate applicants. Staff provides information to prospective students, guidance counselors and the general public to inform them of the academic and other educational programs offered by the University. The department also collects and processes official application materials for all graduate admissions. For specific information on the application process and requirements for admission please refer to the General Information section of this catalog.

Location: PC 140, University Park, 348-2363; ACI 160, North Miami Campus, 940-5760; Trailers, Broward Program, 475-4150.

### Enrollment Support Services

Enrollment Support Services manages the Division's computerized student records database, the University's degree audit (SASS), and several computer-related programs. This unit also provides computer system planning support to academic units and other departments in the Division. The University Catalog, and the Course Schedule booklet published each semester are produced in this unit.

Location: PC 135, University Park, 348-2933.

### Financial Aid

Financial Aid is provided to students who otherwise would be unable to pursue their educational goals at the University. Financial Aid includes scholarships, grants, loans and campus employment. Financial need is determined on an individual basis using evaluation criteria provided by national agencies. For specific information on types of assistance, eligibility, application procedures and other requirements, please refer to the General Information section of this catalog.

Location: PC 125, University Park, 348-2431; ACI-160, North Miami Campus, 940-5765.

### Registration and Records

The Office of Registration and Records is responsible for directing the University registration activities, including Off campus course registration, and establishing, maintaining and releasing students' academic records. The office is also responsible for Space and Scheduling, Veteran's Affairs, Graduation, and Records Archiving.

The office staff has the responsibility to serve the student, faculty, other administrative offices, and the general public; to hold safe and preserve the confidentiality of the student's records; and to ensure the integrity of the University's policies and regulations.

Location: PC 130, University Park, 348-2363; ACI 160 North Miami Campus, 940-5750; Broward Program, 475-4150.

### Information Resource Management (IRM)

All computing and telecommunications activities on FIU campuses are under the direction of the Associate Vice-President for Information Resource Management (IRM). The three major units of IRM are University Computer Services (UCS), the Southeast Regional Data Center (SERDAC), and Telecommunications.

#### University Computer Services (UCS)

University Computer Services (UCS) provides instructional and research computing support to the faculty and students of all FIU academic departments on the University Park, North Miami, and Broward campuses.

Computer hardware accessible to students includes a DEC VAX 8800 super-minicomputer running VMS, a SUN 4/280 minicomputer and a SPARC-server 390 running UNIX, and numerous IBM-compatible and Apple microcomputers. Services of most interest to students include: introductory seminars and workshops on the most widely used equipment and software; comprehensive documentation libraries; public terminal labs; dial-up and direct VAX/SUN access; open microcomputer labs; a discount microcomputer store; assistance with micro-to-larger system data communications; and peer and professional consultation on various other computer-related prob-

lems, within the limits defined by the academic departments.

In addition to instructional computing support, UCS, through its Applications Systems and User Services Groups, provides support for the administrative functions of the University, including Admissions, Registration, and Financial Aid and Cashiers.

**Lab Use:** Students are required to have a valid FIU picture ID card to use UCS terminal and micro labs. Occasionally, during the peak periods before midterm and final exams, lab hours are extended to meet increased demand. Nevertheless, users are advised to complete assignments early; time limits may be imposed during periods of high demand. Ethical computing practices are enforced. The University Park student lab facility is located in PC-411, PC-413, PC-414, PC-415, PC-416, PC-419, PC 422, PC 322, BA 150 and GC-111E. For a recorded message with current University Park student lab hours, call 348-2174. Please direct other inquiries to the staff offices in PC-413A, 348-2568. The North Miami Campus combined micro and terminal lab is located in ACI 293. Call 940-5589 for information concerning the North Miami facility.

**Part-time Student Employment:** Each semester, University Computer Services employs over 35 part-time, student user consultants. Although primarily responsible for maintaining a good working environment and flow of users through lab facilities, these consultants also diagnose and resolve system and equipment malfunctions, and train other students to use the tools and computing resources available in the labs. Given the many different disciplines of the lab users, exposure to a large variety of hardware and software, and direct training by UCS professional staff, working as a user consultant for several semesters provides an excellent career experience and reference. Students with better than average interpersonal and computer skills are invited to apply.

#### Southeast Regional Data Center (SERDAC)

The State University System's Southeast Regional Data Center provides primary academic computing services to Florida International University via an Ethernet network which connects student and faculty workstations to the Data Center's Unix/SUN/E and VMS/DEC VAX cluster services.

SERDAC's computers allow convenient access to the Internet and Bitnet international computer networks.

Information on these services may be obtained by calling 348-2700.

SERDAC's word processing facility offers a multitude of services, from the high volume generation of personalized letters and envelopes, to the electronic transmission of manuscripts to selected publishers. For information concerning this facility, please call 348-3069.

Primary operations and dispatch services for faculty, student, and administrative printout are located in University Park, PC-436. Please call 348-2109 for information concerning this facility.

SERDAC offers personal computer/workstation maintenance to the University community. Currently, the SERDAC maintenance facility has been designated as a factory authorized service center for IBM, Zenith, and Apple personal computers. Please call 348-2117 for information.

## Telecommunications

This organization is responsible for providing voice and data communications services to the University community. Faculty and staff are the primary users of the University telephone system, and they share with students several inter-campus data communications networks. These provide users access to all University computing resources, and gateways to statewide, national, and international computer networks.

FIU Telephone Operators are on duty seven days a week. They are responsible for servicing incoming information calls for the University Park (348-2000) and North Miami (940-5500) Campuses.

Since they can notify the proper authorities in case of on-campus emergencies, FIU Operators may also be reached by dialing "0" at University Park and ext. 5500 at North Miami. However, in an emergency, direct contact should also be made with Public Safety by dialing ext. 2911 at University Park and ext. 5911 at North Miami.

## University Relations and Development

The Division of University Relations and Development is responsible for the operation of all University programs relating to external relations and institutional advancement. Division activities are centered in three departments:

### Development

The Development Office coordinates the University's efforts to raise funds in support of the University and its programs from alumni and other individuals, corporations, foundations, and other private sector organizations. The Office develops and implements numerous programs to raise funds annually from alumni and others through the Fund for FIU, and works closely with the Board of Trustees of the FIU Foundation and other volunteers to increase private support for the University and its students.

The Vice President for University Relations and Development serves as the principal University liaison to the Board of Trustees of the FIU Foundation, Inc., a group of leading South Florida business and community leaders dedicated to securing community support and private funds for the University.

### Alumni Affairs

The Office of Alumni Affairs seeks to maintain contact and encourage communication with and participation in special events with the more than 45,000 FIU alumni of record. Alumni participation is stimulated through activities by the FIU Alumni Association and through programs sponsored by this office including: publications, alumni social events, career development programs, speakers and workshops.

and students are issued by the office to the media. Media Relations also operates a Video News Service, a program that provides broadcast quality video news services to television stations interested in FIU research or interviews with faculty experts.

The Office of Public Affairs plans and administers community-oriented public relations activities and projects, with a special emphasis on local and national Hispanic communities. In addition, the office handles a variety of other media relations and public affairs projects.

The Office of Publications produces effective and informative publications to advance the University's mission. It provides services including design/graphics, electronic typesetting and desktop publishing, mechanicals and production supervision. In conjunction with the typesetting auxiliary, this office produces internal and external university publications, forms and letterheads, promotional collateral and advertisements.

The Office of University Communications facilitates communications to FIU's internal audiences and alumni community, and provides specialized public relations and editorial services to the division and executive staff. The office also manages the editorial contents of Inside, the University's faculty/staff newsletter, and FIU Alumni News.

The Office of University Events strengthens ties between the University and community through its planning and coordination of major community events held on the FIU campuses. The office manages events including commencement, convocation, employee service awards, presidential lectures and dinners and fund-raising receptions, and hosts special campus visitors.

## University Budget Planning Office

The University Budget Planning Office is responsible for the development of all operating and biennial budgets in all budget entities, including the five year plan, legislative budget request, operating budget request and internal operating budget plan. The office is staffed by a director, a secretary, and three professional staff.

## University Relations

The Office of University Relations comprises five units providing professional staff and services to support the University's public relations and advancement activities.

The Office of Media Relations is the University's primary linkage with the print and broadcast news media. News releases and public service announcements on university programs, policies, events, faculty, administrators

## Centers and Institutes

### Center for Accounting, Auditing, and Tax Studies

The Center for Accounting, Auditing, and Tax Studies (CAATS) conducts and sponsors innovative research. Major ongoing projects focus on the audit impact of emerging technology and on detection of fraud.

CAATS builds bridges to practitioners by turning ideas into products; it enhances the value of accountants' services to clients and to the public by contributing to audit efficiency and effectiveness. CAATS' international commitments relate to the accounting issues confronting the less developed nations, particularly in the Middle East and Latin America.

CAATS also conducts seminars and short courses designed to provide educational opportunities to South Florida public accountants, internal auditors, and management accountants. CAATS strives to be self-supporting. Net fees earned by providing educational opportunities to accountants, together with contributions received from the public, are applied to research and to the enrichment of graduate instruction. In this way, CAATS provides the margin of excellence which enriches the entire educational experience.

All CAATS activity is dedicated to advancing accounting, auditing, and tax knowledge. CAATS is located in BA 233, University Park, 348-2581.

### Center for the Administration of Justice

The Center for the Administration of Justice (CAJ) was founded at Florida International University, a member of the State University System of Florida, in 1984 to engage in research, training and public education about the administration of justice in Latin America. With offices in Miami and San Jose, Costa Rica, CAJ has become a unique international resource at the forefront of justice sector reform in Latin America.

CAJ employs a multidisciplinary and international staff of specialists, including lawyers, political scientists, public administrators and public policy

analysts. Many are former justice sector officials with experience and skills in justice sector issues.

Giving special emphasis on support to local efforts to strengthen and invigorate fair and independent justice systems, the CAJ regularly works with public officials, scholars and practitioners in Latin America.

The CAJ has become a leading source of information and leadership on justice sector reform issues in Latin America. Its assessments have been widely disseminated and have been critical in public policy decision-making throughout the region.

### Center for Banking and Financial Institutions

The College of Business Administration at Florida International University has a long tradition of preparing students for careers in the banking and financial institutions. The Center for Banking and Financial Institutions was established to provide additional services to banks and financial institutions located in the Southeast United States and in Latin America and the Caribbean.

Associates of the Center for Banking and Financial Institutions are a select group of highly qualified functional specialists in the areas of accounting, finance, information systems, marketing, and human resource management, who are interested in the application of their functional specialties in solving contemporary organizational problems in banks and financial institutions.

The center for banking and Financial Institutions at FIU meets the demands of the banking and financial service sector through four major activities:

#### Education

The Center for Banking and Financial Institutions along with the Department of Finance, co-sponsors the Banking Certificate program. Upon completion of a four course sequence of banking and financial institution courses, students are awarded a Certificate in Banking from the College of Business Administration. The Center also supports educational opportunities for bank and financial institution employees and other individuals who wish to continue their education in the area of banking and financial institutions, through other off campus programs.

### Management Development

The Center for Banking and Financial Institutions develops and conducts high quality training programs and conferences on topics that are of interest to and demanded by banks and financial institutions. The Center also offers custom in-house training programs for those institutions who desire a more focused or specialized program.

#### Research

The Center for Banking and Financial Institutions supports theoretical and applied research on problems and issues in the financial service sector. The Center also publishes an academic journal, *The Review of Research in Banking and Finance*.

#### Consulting

The Center for Banking and Financial Institutions serves as a consulting clearinghouse. The Center will assist banks and other financial institutions in contacting experts from FIU and nationwide to assist them in solving unique problems in their organizations.

The Center for Banking and Financial Institutions is located in BA-332, University Park, 348-2771.

### Center of Economic Research and Education

The Center of Economic Research and Education is a Type II Center approved by the Board of Regents of the State University System. The purpose of the Center is to foster a greater understanding of economics. The Center represents an important link between the University, business, and education communities. As part of its activities, the Center undertakes research projects, sponsors conferences and seminars, provides courses in economic education for teachers, and disseminates economic data and information.

Established in 1982 as one of eight centers located throughout the State University System, the Center is located in DM 314, University Park. Its phone number is 348-3283.

### Center for Educational Development

The Center for Educational Development (CED) is a multidisciplinary unit based in the College of Education

whose mission includes: (1) planning, technical assistance, training and research in support of educational systems development internationally and domestically; (2) increased minority group access to and achievement in educational systems; (3) acquisition of state and external resources for development of educational systems; and (4) multi-institutional collaboration in educational development projects and research.

The Center is governed and supported jointly by Florida International University, Miami Dade Community College, and the University of Miami. It is comprised of two specialized institutes: the International Institute of Educational Development and the Urban Educational Development Institute.

For more information call 940-5820, or Telefax 956-5494, or write to the Executive Director, Center for Educational Development, College of Education, ACI-370, North Miami Campus, Florida International University, North Miami, FL 33181.

## Center for Labor Research and Studies

The Center for Labor Research and Studies (CLR&S) was established in 1971 to promote research, curriculum development and community service in labor relations at the University. Accredited through the University and College Labor Education Association (UCLCA), the Center is one of 51 accredited labor centers in the United States. Its broad mission is to provide services to workers and their organizations. This broad mission translates into three specific objectives: 1) to provide comprehensive, statewide labor education service; 2) provide internal and applied research programs designed to support faculty research in labor relations, the changing nature of work, and labor education issues; and 3) offer a multidisciplinary credit and non-credit curriculum in labor studies at the University.

As a Type I Center of the Florida State University System, the CLR&S has major responsibility at the University for research on labor relations and the changing nature of work in Florida as well as curriculum development and community service. This responsibility can be met, in part, by following the University's mandate as described in its mission statement: (to) serve the broad community with special concern for greater Miami and South Florida, enhancing the metropolitan area's

capacity to meet its cultural, economic, social and urban challenges.

Since it was founded, the CLR&S has become known nationally for its innovative, statewide, non-credit training programs. These educational activities, which serve over 2,000 students a year, have helped to educate labor and management participants not only in labor relations but have introduced innovations in pension fund administration, dynamics of privatization, and International labor perspectives to local and national audiences.

The Center houses various projects which serve to carry out its research and training functions. Among them are individualized non-credit courses, a Union Leadership Academy Certificate Program, a Contemporary Issues Program, and applied and theoretical research projects. Faculty research is distributed through its various publication series.

A credit certificate in Labor Studies, a Professional Certificate in Labor Studies and Labor Relations, and a Labor Studies Concentration in Liberal Studies are offered as well as conferences, workshops, and consultation and research services. The Center is located in TR-2, University Park, 348-2371.

## Center for Management Development

The Center for Management Development, located in the office of the Dean, College of Business Administration, was created by the Board of Regents in 1980.

### Contract Training

Management training and executive development programs are provided in the community and on campus. Programs are created to meet the unique training needs of each client. Faculty/trainers use highly interactive, practical, and industry-specific activities aimed toward developing job-related competencies. Certificates, Continuing Education Units (C.E.U.'s), and Nurses Contact Hours may be earned.

### Certificate Programs

Professionals who desire to advance their careers by upgrading their knowledge and skills will benefit from participating in the appropriate Certificate program. Certificates may be earned in:

Personnel Administration

Training & Human Resource Development  
Managing Quality Health Care Systems  
Marketing

The Center is located in BA 326A, University Park Campus, 348-4237.

## Technical Assistance and Consultation

The Center is a clearing house for matching a variety of faculty resources to complex and specialized needs of the community. It draws on a variety of disciplines in the College of Business Administration to serve the private and public sectors.

## Drinking Water Research Center

The Drinking Water Research Center (DWRC), the only facility of its kind in the State of Florida, is primarily devoted to conducting scientific research and developing essential technologies which can be used to provide quality drinking water. Among the Center's areas of investigation are:

Water Treatment-evaluating treatment processes; conducting research on the reactions that lead to formation of potentially carcinogenic compounds during water disinfection with chlorine; evaluating alternative disinfectants and their effect on water quality; researching the use of high energy electrons in water, wastewater and hazardous waste treatment.

Surface Water Quality-examining biological sources of acid rain; studying treatment of domestic, industrial and hazardous wastes since improper disposal can affect surface water quality.

The Everglades-examining nutrient loading and ecosystem response; studying ground water movement with changes in drainage canal levels; examining the question of microbiologically mediated chemical processes; all to help bring understanding about how changes in conditions in the Everglades will affect the water quality in the Biscayne Aquifer, the source of South Florida's water.

Although the Center receives support from the state, its research is primarily funded through research grants or contracts awarded to individual research projects. Funding has been received from the U.S. Environmental Protection Agency, the National Science Foundation, the U.S. Department of Energy, NASA, the South Florida Water Management District,

The Everglades National Park, the Dade County Department of Environmental Resources Management, local water utilities and private companies.

While the Center has a complete array of instrumentation for the water quality analyses necessary in the course of its research projects, time and staff constraints do not permit routine testing of water for individuals.

The DWRC does not conduct academic classes. However, qualified students often have an opportunity to work as a research assistants in the DWRC laboratories or carry out independent research projects. Cooperation and interchange with other departments in the University is stressed.

The Center is part of the College of Engineering and Design and is located in VH 326, University Park, 348-2826.

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## Elder's Institute

The Elder's Institute, a continuing education unit within the Southeast Florida Center on Aging, serves the educational needs of the senior adults on the University's North Miami Campus. The Institute's mission and scope is to initiate, plan, design, and manage non-credit short courses, lectures, seminars, and workshops for the retired older learner. Programs are offered during daytime hours, on campus. The courses offered are primarily in the humanities, the behavioral sciences and the social sciences. Workshops and seminars provide opportunities to develop new skills and to explore methods and means for personal growth and self-improvement. The Institute's instructional staff are community experts, University faculty and retired seniors. The participants are motivated learners who seek knowledge, new information and skills for intellectual stimulation and personal growth. Additional benefits are increased social opportunities which can lead to new friendships and meaningful relationships. The Institute also serves as a resource for community agencies and professionals in the field of gerontology. The Institute is located in ACI-383B, North Miami Campus, 940-5910.

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## English Language Institute

Since 1978, the English Language Institute (ELI) has offered non-credit English language instruction to non-native

speakers of English in the community and from abroad.

Classes in reading, grammar, writing, and conversation are taught at five levels of proficiency. Language laboratory facilities are available in which students can increase their listening comprehension and speaking skills under the guidance of an instructor. Students normally take a full, four-course load, but it is also possible for fully admitted University students to take a course in a single skill.

### Testing and Placement

The English Language Institute offers proficiency testing of both written and oral proficiency in English as a support service for academic units throughout the University. Evaluative procedures are designed to fit the needs of individual programs or schools, to assist them in the identification of individual students' level of proficiency in English, and to place students in appropriate programs of study when needed. In addition, the Testing and Placement Center regularly administers the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE) for members of the University and Dade County school communities. Finally, the Center provides certification in oral English proficiency through the FIU Oral English Proficiency Exams in cooperation with English language agencies abroad.

### ESL Evening and Saturday Program

The English Language Institute offers non-credit courses in the evening and on Saturday for non-native speakers of English.

### Accent Reduction

Accent reduction classes are available for non-native speakers of English who have a good command of the language but who wish to improve their pronunciation.

The English Language Institute is located in PC 316, University Park, 348-2222.

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## FAU-FIU Joint Center for Environmental and Urban Problems

Recognizing that many of Florida's environmental and urban problems are interrelated by the need for effective growth management, the Florida Legislature in 1972 established the Joint Center for Environmental and Urban

Problems at Florida Atlantic University and Florida International University. In the two decades since then, most of Florida's growth management and environmental laws and policies have taken shape, and the Joint Center has been a frequent and important contributor to policy formation at the state, regional, and local levels.

The Joint Center functions as an applied research and public service facility that carries out programs supportive of government agencies, educational institutions, and non-profit organizations. The Center is active in the following program areas: (1) in-house research on environmental and urban problems; (2) research projects, supported by grants and contracts with public and private agencies, that address environmental and urban problems; (3) applied research grants awarded to faculty at the two universities; (4) publication of the Joint Center's quarterly journal, *Environmental and Urban Issues*, and growth management monograph series; (5) production, in conjunction with FIU's media services, of television documentaries and public service messages concerning selected urban and environmental issues; and (6) workshops, assemblies, conferences and lectures.

The Joint Center maintains offices on FAU's Broward campus at University Tower in Fort Lauderdale, at FIU's North Miami Campus, and at the FAU Boca Raton campus.

An associate director, research associate, and secretary staff the FIU office, with support from student research assistants. University faculty members and visiting research associates frequently supplement the staff.

### Research

Research at the Joint Center focuses on the development and implementation of public policy in the areas of growth management, urban planning, and natural resource management. The Joint Center is committed to assisting government agencies and communities with research in these areas. Recent research topics have included wetlands management, affordable housing, transportation and land use, and redevelopment strategies.

Research clients have included the U.S. Environmental Protection Agency, the U.S. Army Environmental Policy Institute, the Florida Department of Community Affairs, the Florida Department of Transportation, the Florida Board of Regents, Miami-Dade Community College, and the Palm Beach County Planning Department.

## Service

In cooperation with local, regional and state agencies, and with private organizations, the Joint Center has organized and staffed conferences on issues of agricultural land retention, protection of drinking water supplies, and growth management. In conjunction with FIU's Media Services, television documentaries concerning coastal management issues, agricultural land retention and the lives of two nationally prominent environmental leaders in Florida have been produced and distributed for public education purposes. The FIU office of the Joint Center is located in Academic I Room 370, North Miami Campus, 940-5844.

## The FIU Institute of Government

The Institute of Government, as a part of the School of Public Affairs and Services, provides technical assistance, consulting services, policy forums and executive leadership development programs to municipal, county and state administrators, staff members, appointees and elected officials in Dade, Monroe, and Broward counties. The program draws the University together with the community in which it resides, and couples ideas and skills from many disciplines with working governments.

Upon request, the Institute develops and delivers specialized training for governmental units to address any needs they have identified. The training is developed in consultation with the clients and can be delivered at their site or the University. The Institute provides a workshop series for career development for governmental staff.

Technical assistance and applied research service is also provided for a wide variety of units and divisions within state and local government.

The Institute and the Department of Public Administration conducts the Executive Development College for mid-career public and voluntary sector management. Mid-career managers with experience in the public sector or voluntary sector are eligible for a certificate program in leadership and management. The program emphasizes problem solving and decision making in government and the voluntary sector, personal growth, career development and state of the art management tools.

The Institute arranges technical assistance and consulting services when governments feel they would benefit

from outside support. They might, for example, be seeking to solve an internal problem, to gather and analyze research data pertinent to their operation, or to carry out an evaluation of some segment or all of their operation.

The Institute holds conferences and workshops as a forum for community discussion about and analysis of policy issues of concern to local governments in the South Florida area.

The Institute develops and carries out executive leadership development through a number of programs, such as, the annual Executive Leadership Development Mentoring Program. This program links upper-level public administrators and elected officials with less-experienced administrators and officials, in a year-long program starting each fall, to provide personal and professional growth for each individual.

## International Institute for Housing and Building

The International Institute for Housing and Building is established by the College of Engineering and Design, to provide expertise in the design, engineering, architectural, and management aspects of construction. The Institute provides academic research, and service programs to Southeast Florida, Latin America, the Caribbean, and developing nations throughout the world.

The Institute emphasizes the following activities related to housing environment.

1. To initiate and carry out research on problems related to building planning and construction, considering especially the technology, economic, financial, and managerial aspects of the topic.
2. To generate funds from outside sources to finance theoretical and applied research activities.
3. To disseminate the results of research projects and encourage their implementation.
4. To provide technical services to private and official organizations with a special emphasis on service to the housing production industries of South Florida and in international context.
5. To act as an interface between new developments in Housing Science and their application in the field of housing and planning in South Florida and to assess their relevance to the housing industry.

6. To collect documents and disseminate information on the latest advances in building science and housing.

7. To attract researchers of the international stature and reputation to the University and South Florida.

8. To develop a learning environment in the area of building sciences relevant to the needs of low- and medium-income people of the world.

9. To collaborate with other research institutes, government agencies, and universities to increase the effect of its research program.

10. To organize scientific meetings, symposia conferences, seminars, and workshops at the University and elsewhere.

11. To incorporate the use of alternative energy, energy conservation, and efficient use of natural resources in the planning of large projects, and to encourage the utilization of indigenous materials and labor sources.

12. To help implement programs to alleviate the impact of various disasters on housing including the coordination of disaster preparedness activities related to housing.

An underlying concern of the Institute is to establish an interdisciplinary environment in which many disciplines within the University and the community can arrive at feasible solutions to housing and building problems. It is located in VH 176, University Park, 348-3171.

## The HRS/Children, Youth and Families Professional Development Centre

The HRS/Children, Youth and Families Professional Development Centre (PDC) at FIU is responsible for providing child welfare and juvenile justice staff with both a knowledge base and a set of practical skills. The training builds competency in the practices, policies, and procedures that are essential to carrying out the mission of the CYF program.

The PDC Provides a foundation of skills and knowledge to ensure that all new staff have basic competencies; and offers specialty and inservice training to increase and develop specialized competencies for experienced staff.

The purpose of these focused training programs is to enable staff to make better casework decisions regarding children and families, resulting in im-



proved service outcomes for these clients.

## Institute of Judaic Studies

The Institute of Judaic Studies (IJS) brings the University and the community together in a mutual effort to nurture teaching and research in academic areas which stand as the cornerstones of Western Civilization. Contemporary issues and problems provide focal points for study, dialogue, exchange and travel.

The objective of the Institute is to infuse Jewish content into the curriculum of the University at all appropriate levels. The Institute fosters scholarship and inquiry into Jewish themes leading to the development of course offerings within existing academic departments. For more information, call 348-3225.

## Institute for Public Policy and Citizenship Studies

The Institute for Public Policy and Citizenship Studies was founded in 1985 to offer students, faculty, and the community alternative learning opportunities in public policy and citizenship development. Four key objectives have guided the Institute's programs:

1. To provide non-traditional educational opportunities to the student body on the responsibilities and opportunities of citizenship.
2. To assist students and faculty in understanding the impact that public policy has on their daily lives and in their career pursuits.
3. To promote interdisciplinary research efforts among faculty on local and national policy matters.
4. To encourage joint university and community efforts on local policy issues.

The Institute sponsors the Student Honors Mentor Program, a semester-long opportunity for students to meet and interact with peers and faculty members from other academic disciplines. The Mentor Program encourages participants to examine a public policy issue in a small group setting through discussions, research, or innovative projects. In providing an alternative mode of learning, the Institute hopes to give students practical ex-

perience in community decision-making and problem-solving.

The Institute also sponsors and supports a variety of programs through which FIU students provide community service. One such program is the Student Literacy Corps, in Dade County Public Schools' reading and writing skills to illiterate citizens. Other programs address environmental issues, citizen participation in government, and inter-generational projects.

The Institute also works in cooperation with other FIU centers, including the Women's Studies Center, The Center on Aging, The Labor Center, and The Latin American/Caribbean Center.

In addition, the Institute sponsors conferences and events focusing on key policy issues that are salient within our local community. Nationally known speakers and University faculty are invited to present their research findings and perspectives on a variety of issues ranging from citizenship education in Dade County to the ethical implications of an aging society to the impact of government regulations on the fishing industry. The conferences are designed to offer the public and university community additional resources in understanding the policy problems that we, as a community, face on a daily basis.

The Institute is located in PC 242, University Park, 348-2977.

## Latin American and Caribbean Center

The Latin American and Caribbean Center (LACC) promotes advanced education and research on Latin America and the Caribbean, a region of intense interest to the United States. LACC offers undergraduate and graduate certificate programs to both degree and non-degree seeking students, sponsors and promotes faculty research in the region, and offers public education programs on Latin America and the Caribbean to enhance inter-American understanding.

Since it was founded in 1979, LACC has become one of the country's leading programs in Latin American and Caribbean studies. Over 100 language and area studies faculty regularly offer courses on diverse topics related to the region. Special seminars on the Latin American debt and business environment as well as other socio-political and historical issues complement LACC's efforts. Externally funded research programs have supported a continual flow of visiting Latin American

scholars to the University and gifts from the local community have helped the University to build a strong Latin American and Caribbean studies library collection.

LACC regularly places students in foreign study programs and local internships. More information is available in PC 237, University Park, 348-2894.

## Institute for Public Opinion Research

The Institute for Public Opinion Research (IPOR), a research arm of the School of Journalism and Mass Communication, conducts public opinion polls from its survey research lab on the North Miami Campus. The institute was founded in 1983 and was quickly recognized by public and private organizations throughout South Florida as a valuable survey research resource. IPOR's primary function is to provide decision-makers with timely and relatively inexpensive information on how a scientifically selected cross-section of the public stands on various issues. Ways in which IPOR is fulfilling this function include:

1. The annual FIU/Florida Poll which is the most comprehensive public opinion survey conducted in the state. The FIU/Florida Poll asks Floridians about the important issues facing them - crime, education, transportation, health, taxes, politics, etc. - and asks many of the questions year after year, providing valuable longitudinal information not before available. The publication in book form of the results of the FIU/Florida polls provides public officials, academics, businessmen, and the general public with a ready reference resource about opinion in the state. The information provided in the FIU/Florida Poll books is unique in the United States, and gives planners and decision makers in Florida an additional valuable information resource.
2. IPOR provides survey research expertise to members of the FIU community needing such expertise in conjunction with their official duties at the university. This includes assistance in the preparation of research proposals which call for survey research, provided that the survey research part of the project, if funded, is conducted under subcontract by IPOR in cooperation with the director of the funded project.
3. IPOR's staff and facilities are available in support of instructional activities at the graduate and under-

graduate level involving public opinion research and survey research methodology.

4. IPOR continues to seek external funding in support of its long-standing interest in the area of public-policy communication. That may, for example, include the development of an annual South Florida survey, development of a standard metropolitan area assessment instrument which would be readily available to major cities and counties in the state, or development of a standard instrument by which state and local legislators can quickly and inexpensively gauge the sentiments of their constituents on policy issues.

5. IPOR, in cooperation with the Central American Journalism Project of the SJMC, involves itself in the development of affordable and scientifically acceptable survey research methodology usable in the developing democracies of Latin America and the Caribbean.

IPOR is located in ACI, Room 266, on the North Miami Campus. For more information call 940-5991.

## Center for Multilingual and Multicultural Studies

The Board of Regents established the Center for Multilingual and Multicultural Studies as a center of excellence in order to improve the quality of foreign language, bilingual education, linguistics, and multicultural programs offered in the State.

The main purpose of the Center is to develop, plan and coordinate research and training programs in the areas of foreign languages and literature, linguistics, bilingual education, multicultural approaches to the humanities in international and domestic contexts, and international studies. Its primary research programs focus on language policy, migration, and ethnicity.

The Center houses several projects which serve to carry out its research and training functions. Among these are the African-New World Studies initiative and the documentary project: *Living History: A Reflection on the Cuban Nation and Exile*.

### Cuban Exile History and Archives Project

The Cuban Exile Archives collects rare imprints, manuscripts, audiovisuals, ephemeral artifacts, recorded oral testimonies and machine readable records illustrating and documenting the Cuban-

American heritage. It seeks to disseminate them through historical research by members of the University, other area institutions, and the general public. The resulting research is published in *Cuban Heritage: A Journal of History and the Humanities* which appears quarterly. The preservation of the Cuban community's living testimony through the techniques of oral history is also one of the Project's main concerns. The Project encourages the donation of historically significant materials to the Cuban Exile Archives or to other appropriate repositories.

## Small Business Development Center

The Small Business Development Center (SBDC) is a program designed to provide comprehensive small business management and technical assistance to the small business community. The Center serves as a focal point for linking resources of the federal, state, and local governments with those resources of the University and the private sector. These resources are utilized to counsel and train small businesses in resolving start-up, organizational, financial, marketing, technical, and other problems they might encounter.

The Small Business Development Center is a basic services center. It disseminates business management information, performs financial analyses and management audits, assists in market and feasibility studies, and provides business management counseling and training.

In June 1980, the SBDC started actively fulfilling its mission to the small business community of greater Miami area by providing counseling services and training programs to the public. In the past year, the SBDC staff provided 4,530 people from the community with small business management training. Also, the Center counseled 3,100 persons in starting and managing their small businesses during the same period.

The Center also attracts many clients through its special services such as INFO-BID and the Florida Innovation Program. These services are designed to provide, respectively, leads for government and private contracts to Florida small businesses and assistance to the inventor/entrepreneur. In addition, we provide businesses interested in exporting assistance through our International Trade Center.

The SBDC is actively involved in promoting community relations for the University through the activities of its staff with Chamber of Commerce, trade associations, and community-based organizations. These activities include serving on committees and numerous speaking engagements.

The Center is located in Trailer MO-1, University Park, 348-2272, ACI 350, North Miami Campus, 940-5790, and 46 SW 1st Avenue, Dania, 987-0100.

## Southeast Florida Center on Aging

The Southeast Florida Center on Aging offers a multi-disciplinary program in gerontology with a unique public sector focus. It is the mission of the Center to serve as a focal point for applied public policy research, to design and implement comprehensive gerontological education and training program for students, professionals and older learners, and to demonstrate concepts to serve older persons. The Center seeks to achieve its goals through a wide variety of educational activities designed to further the pursuit of knowledge and understanding about aging in today's society, with particular emphasis upon the development, implementation, and evaluation of public policy.

### Objectives

The Center supports, sponsors, conducts, and participates in a wide range of activities aimed at improving the quality of life for older people of South Florida. Pursuant to its mandate for education and training, research and community service, the Center is engaged in:

1. Development of gerontology education across disciplines throughout the University community.
2. Expanded opportunities for training and professional development of persons working with or planning to work with older people.
3. Aging research, with special emphasis on current and future public policy in the area of long term care.
4. A wide range of lifelong learning and educational opportunities for older people.
5. Technical assistance and support to public agencies and community organizations aimed at improving the effectiveness of programs for older people.

The center consists of three components:

**Research:** Focus on applied public policy research as well as promotion of research involving faculty from a variety of disciplines within the University. There is an emphasis on potential applications of research findings by policy makers and health and social sciences practitioners.

**Education and Training:** Organization, in close collaboration with the academic departments, of credit and non-credit certificate programs for undergraduate and graduate students and for practitioners in the field of aging. Delivery of training seminars and workshops both at the University and at locations throughout Southeast Florida.

The Elders Institute, a continuing education program, offers a broad array of continuing education courses for the older learner and is exploring development of additional educational and cultural activities for older persons.

**Program Development and Technical Assistance:** Design of innovative concepts and programs that further public policy objectives to expand opportunities for older people or to improve the delivery of health and social services to them. The Center provides assistance and support for agencies and organizations serving older people throughout Florida.

The Center is located in ACI 383, North Miami Campus, 940-5550.

## Women's Studies Center

The Women's Studies Center serves as a University resource on the specialized concerns and academic interests of women. A major focus of the Center is the interdisciplinary Certificate Program in Women's Studies which provides support for the certificate faculty committee and the development of the program.

The Certificate in Women's Studies was established to provide an opportunity for the interdisciplinary study of the historical, political, economic, literary, social, and cultural roles of women; and of the function of gender in various societies and cultures. The program is directed toward specialists and generalists alike: it offers a plan of study for students in the various departments who wish to earn a certificate in women's studies, and it welcomes students who wish to enroll in its courses without fulfilling the requirements for the certificate.

The Center provides a place and opportunity to foster women's progress

through such activities as referrals, counseling, peer groups, access to studies and research on women's learning and culture, and assistance on issues of gender inequality. The Center offers seminars, conferences, lecture series, and related events on both academic and women's issues topics.

The Center is located in DM 212, University Park, 348-2408.

## Florida's Statewide Course Numbering System

The course numbers appearing in the catalog are part of a statewide system of prefixes and numbers developed for use by all public post-secondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the state. All courses designated as equivalent will carry the same prefix and last three digits.

The classifying and numbering of courses is done by faculty in each academic discipline. Their work is reviewed by all of Florida's postsecondary institutions who make suggestions and criticisms to be incorporated into the system.

The course numbering system is, by law, descriptive not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in post-secondary education in Florida in a manner that is intelligible and useful to students, faculty, and other interested users of the system.

The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution. For example, if a student has taken SYG 000 at a community college, he cannot be required to repeat SYG 000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student

regardless of where the credit was earned.

It should be noted that a receiving institution is not precluded from using non-equivalent courses for satisfying certain requirements.

### General Rule for Course Equivalencies

All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 post-secondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SYG 000.

### First Digit

The first digit of the course number is assigned by the institution, generally to indicate the year it is offered: 1 indicates freshman year, 2 indicates sophomore year, etc. In the sociology example mentioned above, one school which offers the course in the freshman year will number it SOC 1000; a school offering the same course in the sophomore year will number it SOC 2000. The variance in first numbers does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantively equivalent.

### Titles

Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools 'Introductory Sociology,' 'General Sociology,' and 'Principles of Sociology'. The title does not affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

### Lab Indicators

Some courses will carry an alpha suffix indicating a lab. The alpha suffixes 'L' and 'C' are used as follows to indicate laboratories: 'L' means either (a) a course, the content of which is entirely laboratory or (b) the laboratory component of a lecture-lab sequence in which the lab is offered at a different time/place from the lecture.

'C' means a combined lecture lab course in which the lab is offered in conjunction with the lecture at the same time/same place.

**Examples**

Marine Biology	OCB 013 (lecture only)
	OCB 013L (lab only)
Marine Biology	OCB 013C (lecture and lab combined)

Therefore, OCB 013C is equivalent to OCB 013 plus OCB 013L.

**Equivalency of Sequences**

In certain cases, sequences of courses in a given discipline are equivalent rather than the individual courses which make up these sequences. (For example, CHM\_045 plus CHM\_046). In several institutions students have completed substantively equivalent content. These sequences are clearly identified in the Course Equivalency Profiles.

**Explanation of Prefixes and Numbers**

Prefixes and numbers in the course numbering system are not chosen at random; they are designed to describe course content in an organized fashion within a classification system developed for each subject matter area.

Generally, each of the major classifications in a discipline is represented by a three-alpha prefix. In some cases, one three-alpha prefix has been sufficient for the entire discipline. A discipline may use as many prefixes as necessary to accommodate its major classifications. The logic of the system allows it to be infinitely expandable with minimal disruption to existing numbers.

History, for example, has seven prefixes: AFH, African History; AMH, American History; ASH, Asian History; EGC, European History; HIS, History - General; LAH, Latin American History; and WOH, World History. All history courses in the state will carry one of these prefixes.

A complete inventory of taxonomic listings, equivalent and unique courses has been made available to each academic department of every institution in the state. Students, through their local advisors, should use this information in designing programs which will transfer smoothly.

A more specific example is AMH 3421 (Early American History)

<b>AMH</b>	Broad Area of American History; part of discipline of History
<b>3</b>	Junior level offering (at this particular institution)
<b>4</b>	In Taxonomy for AMH 400 series indicates 'Areas in American History'

- |          |  |
|----------|--|
| <b>2</b> | In Taxonomy for AMH this digit indicates courses in 'History of Florida'                           |
| <b>1</b> | Last digit in this case refers to group of equated courses dealing with 'Early History of Florida' |

**Exception to the Rule for Equivalencies**

The following are exceptions to the general rule for course equivalencies:

1. All numbers which have second digit of 9 (Ex.: ART 2906) are 'place keeper' numbers for such courses as directed independent study, thesis hours, etc. Courses with 900 numbers must be evaluated individually and are not automatically transferable.
2. All internships, practicum, clinical experiences and study abroad course, whatever numbers they carry, are not automatically transferable.
3. Performance or studio courses in Art, Dance, Theatre, and Music are not automatically transferable, but must be evaluated individually.

**Authority For Acceptance of Equivalent Courses**

Authority for acceptance of equivalent courses is State Board of Education Rule 6A-10.24(16) which states:

(16) When a student transfers among postsecondary area vocational-technical centers, community colleges, and universities, the receiving institution shall award credit for courses satisfactorily completed at the previous institutions when the courses are judged by the appropriate common course designation and numbering system faculty task force to be equivalent to courses offered at the receiving institution and are entered in the course numbering system. Credit so awarded can be used by transfer students to satisfy certificate and degree requirements in these institutions on the same basis as native students.

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Director, Small Business Development Center	Marvin Nesbitt
Executive Director, Southeast Florida Center on Aging	Max B. Rothman
Director, Women's Studies Center	Marilyn Hoder-Salmon

## College of Arts and Sciences

The College of Arts and Sciences further the study of fundamental intellectual disciplines, and serves the University's other Colleges and Schools. The College grants Bachelor's, Master's, and Ph.D. degrees. In addition, the College serves students who need to complete general education and core curriculum requirements, and other requirements, in order to enroll in specific disciplines or professional programs.

The College is composed of 18 departments, in addition to the School of Computer Science, and three interdisciplinary programs.

### Graduate Programs

The College has academic programs leading to Master's degrees in biology, chemistry, comparative sociology, computer science, creative writing, economics, environmental and urban systems (offered jointly with the College of Engineering and Design), geology, Hispanic studies, history, international studies, linguistics, mathematical sciences, physics, and psychology.

The College offers academic programs leading to the Ph.D. in biology, computer science, economics, and psychology.

**Note:** The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Biological Sciences

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**Brad Bennett, Assistant Professor**

**Charles Bigler, Associate Professor**

**Chun-fan Chen, Associate Professor**

**Leon A. Cuervo, Professor**

**George H. Dalrymple, Associate Professor**

**Michael K. Diamond, Senior Staff Biologist**

**Kelsey Downum, Associate Professor**

**Jeff Elhal, Assistant Professor**

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**Kenneth Gordon, Associate Professor**

**Rene J. Herrera, Associate Professor**

**Ronald D. Jones, Associate Professor**

**William Klein, Research Scientist**

**Suzanne Koptur, Associate Professor**

**David N. Kuhn, Assistant Professor**

**David W. Lee, Professor**

**John Makemson, Professor**

**David R. Maurer, Lecturer**

**Gerald L. Murison, Professor and Chairperson of Graduate Studies**

**Steven F. Oberbauer, Assistant Professor**

**Case K. Okubo, Associate Professor**

**Thomas E. Pliske, Lecturer**

**L. Scott Quackenbush, Associate Professor**

**Laurie L. Richardson, Assistant Professor**

**Roger Sanders, Research Scientist**

**Martin L. Tracey, Professor**

**Joel Trexler, Assistant Professor**

**Terrence Walters, Research Scientist**

**Ophelia I. Weeks, Associate Professor**

### Master of Science in Biology

To be admitted into the Master's degree program in Biology, a student must:

1. Hold a Bachelor's degree in a relevant discipline from an accredited college or university.
2. Have a 3.0 average or higher during the last two years of the undergraduate program and a combined score (verbal and quantitative) of 1000 or higher on the Graduate Record Exam.
3. Two letters of recommendation of the student's academic potential.
4. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 550 or higher.
5. Receive approval from the Departmental Graduate Committee.
6. Acceptance by a faculty sponsor.

### Degree Requirements

The Master of Science in Biology consists of 36 credits, including a thesis based upon the student's original research. A maximum of six credits of post-baccalaureate coursework may be transferred from other institutions, subject to the approval of the Graduate Committee.

### Required Courses

BSC 6457	Introduction to Biological Research	3
BSC 5931	Graduate Seminar (a one-credit course taken twice)	2
BSC 5945	Supervised Teaching in Biology	2
	Workshops and Laboratories <sup>1</sup>	4
BSC 6971	Master's Thesis	6
	Electives <sup>2</sup>	21
	Foreign language competency <sup>3</sup>	

<sup>1</sup>Following graduate committee approval, students may fulfill this requirement with any combination of graduate workshops, graduate laboratories, and graduate techniques courses (minimum of three separate courses).

<sup>2</sup>These must include at least 16 credits of courses in the Department of Biological Sciences. No more than six credits can be transferred from another graduate program, subject to the approval of the Graduate Committee. At least six credits must be at the 6000-level (excluding thesis credits). Credits taken at the 4000-level beyond six, or at a lower level, will not count towards graduation.

<sup>3</sup>Competency will be determined by examination consisting of a clear translation of technical material in a foreign language. Credits taken to gain such proficiency will not count toward graduation. As an alternative, students may substitute either six credits of computer programming or mathematics beyond Calculus II.

### Graduation Requirements

A grade of 'C' or higher must be obtained in all courses with a cumulative average of 3.0 or higher in the 36 credits, and a thesis must be completed and accepted after presentation to an ad hoc Thesis Committee chosen by the student's Thesis advisor.

### Doctor of Philosophy in Biology

To be admitted into the Ph.D. program in Biology, a student must:

1. Hold a Bachelor's degree in a relevant discipline from an accredited college or university;

2. Have a 3.2 grade point average during the last two years of the undergraduate program or a Master's degree in a relevant discipline;

3. Have a combined score (verbal and quantitative) of 1,000 on the general Graduate Record Exam (GRE) and have results of the biology advanced section;

4. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 550 or higher;

5. Arrange to have three letters of recommendation sent to the Department Director of the Graduate Program evaluating the applicant's potential for graduate work;

6. Receive approval from the Departmental Graduate Committee.

### Degree Requirements

The Ph.D. in Biology is conferred in recognition of a demonstrated ability to master a specific field of knowledge and to conduct significant independent original research. A minimum of 90 semester credits of graduate work beyond the baccalaureate are required, including a dissertation based upon the student's original research. A maximum of 36 credits may be transferred from other graduate programs with the approval of the Advisory Committee.

### Required Courses

BSC 5931	Graduate Seminar (a one credit course taken twice)	2
BSC 5945	Supervised Teaching in Biology	2
Workshops and Laboratories <sup>1</sup>		4
BSC 7980	Ph.D. Dissertation	24
Electives <sup>2</sup>		55

Foreign Language Competency<sup>3</sup>

### Recommended course

BSC 6457	Intro to Biological Research	3
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<sup>1</sup> Following graduate committee approval, students may fulfill this requirement with any combination of graduate workshops, graduate laboratories, and graduate courses (minimum of three separate courses).

<sup>2</sup> No more than 36 credits may be transferred from another graduate program, subject to the approval of the Graduate Committee.

<sup>3</sup> Competency will be determined by examination consisting of a clear translation of technical material in a foreign language. Credits taken to gain such proficiency will not count toward graduation. As an alternative, students may

substitute either six credits of computer programming or mathematics beyond Calculus II.

### Graduation Requirements

A grade of 'C' or higher must be obtained in all courses with a cumulative average of 3.0 or higher in the 90 credits; demonstration of foreign language competency, and dissertation completed and accepted by the University.

### Course Descriptions

*Note: Laboratories should be taken concurrently with or subsequent to lectures. Students should register for each separately.*

#### Definition of Prefixes

APB - Applied Biology; BCH - Biochemistry; BOT - Botany; BSC - Introductory Biology; EVR - Environmental Studies; MCB - Microbiology; OCB - Oceanography (Biological); PCB - Process Cell Biology; ZOO - Zoology.

**APB 5796C Environmental Instrumentation (3).** Theory and techniques for measurement of environmental parameters of interest to field biologist. Prerequisite: Permission of instructor.

**BCH 5134C Workshop in Chromatography Techniques (1).** Workshop covers the theory and practice of chromatographic techniques to separate complex mixtures of biomolecules, including absorption, ion exchange, size exclusion and affinity chromatography. Prerequisite: Graduate status.

**BCH 5411C Techniques in Molecular Evolution Research (5).** Ribosomal genes from related organisms are amplified by polymerase chain reaction (PCR) and sequenced. Phylogenetic maps are made by computer from sequence data. Students may use material from their own research. Prerequisites: BCH 3023 and Lab, PCB 4524 and Lab or Graduate Status.

**BCH 6130C Workshop in DNA Synthesis and Amplification (1).** Workshop in the chemical synthesis of DNA and the amplification of specific genes by the polymerase chain reaction (PCR). Students may synthesize DNA oligonucleotides for use in their own research. Prerequisite: Graduate status and permission of instructor.

**BCH 6131C Workshop in Radiolabelled Use and Safety (1).** Workshop in the safe use of radiolabels in biological and

biochemical experimentation, labelling of biochemical compounds, purification of labelled compounds, and instrumentation involved in detection of radiolabels. Prerequisite: Graduate status and permission of instructor.

**BCH 6132C Workshop in Electrophoresis (1).** Workshop in the application of electrophoresis to biochemical and genetic experimentation. Students may use material from their own research in the laboratory section. Prerequisite: Graduate status and permission of instructor.

**BCH 6133C Workshop in DNA Sequencing (1).** Workshop in the manual and automated sequencing of DNA. Students may sequence DNA from their own research. Prerequisite: Graduate status and permission of instructor.

**BCH 6507C Workshop in Spectrophotometry and Enzyme Assay (1).** Interaction of light with matter (absorption, fluorescence, light scattering) and emission (chemi- and bioluminescence); analysis of spectra and enzyme kinetics. Prerequisite: Graduate status.

**BOT 5405 Phycology (3).**  
**BOT 5405L Phycology Lab (1).** The physiology and ecology of marine and freshwater algae, including morphology, reproduction, and classification of major groups.

**BOT 5515 Biochemistry of Plant Natural Products (3).** Aspects of primary and secondary plant metabolism will be covered including biosynthesis and degradation of natural products as well as their biological/pharmacological activity. Prerequisite: CHM 3211 or BCH 3023.

**BOT 5575 Photobiology (3)**  
**BOT 5575L Photobiology Lab (1).** The study of basic photochemical mechanisms as they occur in molecular biological processes such as plant growth, animal vision, bioluminescence, and radiation damage. Prerequisite: Permission of instructor.

**BOT 5602 The Functional Ecology of Tropical Plants (3)**  
**BOT 5602L The Functional Ecology of Tropical Plants Lab (1).** The relationship of climate and soils to the distribution and function of the major plant groups of the tropical regions. Prerequisites: Two courses in botany or permission of instructor.

**BOT 5605C Plant Ecology (4).** In-depth study of plant ecology at three levels: Individual, population, and com-

munity. Laboratory and field exercises will examine lecture topics.

**BOT 5682C Florida Plant Communities (3).** Two-week field trip to many diverse plant communities of the state. Ecological and environmental factors influencing plant distribution will be examined, contrasting vegetation among sites. Prerequisites: BSC 1010, BSC 3043 or permission of instructor.

**BOT 6275 Plant Breeding Systems (3).** Ecology, evolution, genetics and development of plant breeding systems. Prerequisite: Permission of instructor.

**BOT 6585C Plant Structure and Function (4).** A quantitative assessment of plant architecture, morphology and anatomy in relationship to physiology, including the measurement of water relations, energy and gas exchange. Prerequisites: Permission of instructor and graduate status.

**BOT 6920 Workshop In Field Techniques In Natural History Of Insect/Plant Interactions (1).** A workshop in the techniques for collecting and preserving plants and insects for biological and taxonomic research.

**BOT 6921 Workshop In Field Techniques In Pollination Biology (1).** Techniques to do a thorough study of the pollination biology of any flowering plant; basic methods and simple instruments for field observations, measurements and manipulations. Prerequisite: Graduate status.

**BOT 6922 Workshop: Video Image Analysis In Biology (1).** Workshop in the use of video image analysis in biological research. Prerequisites: Graduate status and permission of instructor.

**BOT 6923 Workshop: Techniques In Plant Reproductive Biology (1).** Workshop in techniques for research on pollination and fertilization in plants. Histological and microscopic examination emphasized. Prerequisites: Graduate status and permission of instructor.

**BOT 6935 Advanced Topics In Botany (3).** An intensive study of particular plant topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

**BSC 5215 Introduction to the Mechanics of Biological Systems (3).** Mechanical principles are used to analyze the structure and function of

plants and animals; especially the statics of bone systems, and support structures of plants. Prerequisite: Permission of instructor.

**BSC 5345 Techniques In Scientific Diving (4).** Planning and conducting safe scientific diving operations and research. Prerequisite: Civilian Diving Certificate (NAUI/PADI) or equivalent.

**BSC 5409C Biology Laboratory Instrumentation For Secondary Teachers I (3).** Principles and practice of selected instrumental techniques. Spectrophotometry, electrical measurements and separatory techniques. Not for BSC majors. Prerequisites: Three undergraduate credits in physics, three in chemistry, and six in biology.

**BSC 5416C Workshop In Cell Culture Methods and Applications (1).** Utilization of primary and established cells to study growth cell cycle, chromosomes, cell differentiation. Special applications to basic problems in cell molecular biology. Prerequisites: Permission of instructor and graduate status.

**BSC 5606 Biological Systematics (3).** Systems of nomenclature and contemporary topics in classification, including molecular evidence, numerical methods and cladistics. Prerequisite: Permission of instructor.

**BSC 5825 Wildlife Biology (3).** The study of game and non-game wildlife with emphasis on management and population regulation. Prerequisite: Permission of Instructor.

**BSC 5931 Graduate Seminar (1).** Presentation of thesis proposal seminar or thesis defense seminar. Permission of instructor required.

**BSC 5935, 6936 Topics In Biology (1-3).** An intensive study of a particular topic or limited number of topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Senior or graduate standing.

**BSC 5945 Supervised Teaching In Biology (1-2).** Teaching in a biological discipline, under the supervision of departmental faculty. Prerequisite: Graduate standing.

**BSC 6415C Animal Cells In Culture (3)**

**BSC 6415L Animal Cells In Culture Lab (2).** Biology of animal cells cultured in semi-synthetic media: cell nutrition growth, cell cycle analysis, cellular transformation and differentiation, heterokaryons and somatic cell

genetics. Prerequisite: Consent of instructor.

**BSC 6456C Microcomputer Use In Biology (1).** Introduction to microcomputer operating environments, the utility of microcomputers in biology, and computer interfacing to biological instrumentation. Prerequisite: Permission of instructor.

**BSC 6457 Introduction to Biological Research (3).** Analysis of existing biological data and experimental design. Prerequisite: Graduate standing.

**BSC 6926 Workshop In Biology (1-2).** A short intensive treatment of a specialized research topic or technique. Prerequisite: Permission of instructor.

**BSC 6948 Laboratory Visitation (1-2).** Student visits to three laboratories to learn techniques and concepts applicable to M.S. or Ph.D. research. Prerequisite: Permission of instructor.

**BSC 6971 Master's Thesis (1-12).** Completion of dissertation. Prerequisite: Permission of major professor.

**BSC 7980 Ph.D. Dissertation (1-12).**

**MCB 5405 Photosynthetic Bacteria (3).**

**MCB 5405L Biology of Photosynthetic Bacteria Lab (1).** Study of the physiology and ecology of photosynthetic bacteria, including Blue-green algae (cyanobacteria), purple and green bacteria, and Halobacteria.

**MCB 5505 Virology (3)**  
**MCB 5505L Virology Lab (1).** Principles and methods of study of bacterial, plant, and animal viruses. Molecular aspects of viral development, virus pathogens, and carcinogens. Prerequisites: Biochemistry, Genetics, and Organic Chemistry.

**MCB 6418 Bacterial Mineral Cycling (3).** Energy and metabolic processes; detrital food chains; carbon, nitrogen, sulfur and trace mineral cycling; chemoautotrophy; global element cycles. Prerequisite: Permission of Instructor.

**MCB 6445 Microbial Bioluminescence (3).** Molecular mechanisms, physiology, genetics and ecology of bioluminescence in micro-organisms, particularly bacteria. Prerequisite: Permission of instructor.

**MCB 6735 Marine Microbiology (3)**  
**MCB 6735L Marine Microbiology Lab (1).** Physiological-ecological study of the distribution in situ activity and biol-



ogy of marine bacteria; diseases of marine animals; bacterial role in oceanic mineral cycling. Prerequisites: MCB 3023 & L and BCH 3023 & L or MCB 4404 and MCB 4404L.

**MCB 6935 Advanced Topics In Microbiology (3).** An intensive study of particular microbiological topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

**OCB 5634 Marine Ecology (3)**  
**OCB 5634L Marine Ecology Lab (1).** Laboratory to accompany Marine Ecology. Prerequisite: PCB 3043. Corequisite: Marine ecology.

**OCB 5670L Techniques In Biological Oceanography (1).** A laboratory course designed to acquaint the student with biological sampling techniques at sea. Shipboard experience will be required as part of the course. Prerequisites: Previous course in marine biology and permission of instructor.

**PCB 5195 Histochemistry/Microtechnique (3)**

**PCB 5195L Histochemistry/Microtechnique Lab (1).** Chemistry and use of fixatives and dyes; histochemistry emphasizes procedures used in research and pathology labs including techniques for enzymes, protein, carbohydrate, nucleic acids and lipids. Prerequisite: Biochemistry or Cell Physiology.

**PCB 5259 Topics In Developmental Biology (3).** Molecular and cellular mechanisms in the development of plants and animals. Prerequisite: Senior status or permission of instructor.

**PCB 5344L Tropical Ecology Field Lab (2).** Field course in Costa Rica with fieldwork in two or more diverse habitats (rainforest, and dry forest). Emphasis on diversity and interactions between species. Visits to selected sites of deforestation, conservation and restoration.

**PCB 5358 Everglades Research and Resources Management (3).** Application of basic skills in ecology to contemporary issues in the Everglades area, with emphasis on the relation between research and management of wilderness, wildlife, vegetation, water and fire. Prerequisite: PCB 3043 Ecology or permission of instructor.

**PCB 5615 Molecular and Organismal Evolution (3).** The evolutionary relationships among nucleotides and proteins as well as the processes

which yield these relationships. The possible molecular events leading to speciation. Prerequisites: Genetics and Biochemistry.

**PCB 5665 Human Genetics (3)**  
**PCB 5665L Human Genetics Lab (2).** Principles and techniques in the analysis of human populations and primates. Prerequisites: PCB 3513 and lab, permission of the instructor. Corequisite: PCB 5665.

**PCB 5676 Evolution and Development of Sex (3).** The evolutionary explanations for the evolution of sexual reproduction and models of sexual differentiation. Prerequisites: Genetics and Evolution or permission of instructor.

**PCB 5677 Evolution and Development (3).** The models and evidence for the interaction of development and evolution, using both plant and animal systems. Prerequisite: Permission of instructor.

**PCB 5686C Population Biology (4).** Intrinsic properties of natural and theoretical populations and their dynamics and interactions, and responses to disturbance. Includes field problems and computer exercises. Prerequisite: A course in genetics, evolution, or permission of instructor.

**PCB 5687C Evolutionary Ecology (4).** Adaptations and interactions of plants and animals in natural and disturbed habitats. Prerequisite: PCB 3043 or equivalent.

**PCB 5806 Endocrinology (3).** Biochemistry, physiology and anatomy of the endocrine systems of vertebrates and invertebrates. Steroid, peptide, and terpenoid hormones which control reproduction, growth, and other parameters. Prerequisites: BSC 1011, CHM 3211, one physiology course.

**PCB 5835 Neurophysiology (3)**  
**PCB 5835L Neurophysiology (1).** Comparative neurophysiology; physicochemical mechanisms of resting and action potentials; synaptic transmission; neural coding and integration; sensory-motor function and neurophysiological basis of behavior. Prerequisites: Biochemistry or Cell Physiology, Calculus.

**PCB 5837 Comparative Pathology (3).**  
**PCB 5837L Comparative Pathology Laboratory (1).** General mechanisms of disease and comparative evaluation of animal diseases of specific organ systems in various animals including fish, reptiles, birds, and mammals. Pre-

requisites: ZOO 3753 or permission of instructor.

**PCB 5934 Topics In Skeletal Muscle Physiology (4).** Advanced discussion of some aspects of the biophysics, biochemistry and physiology of skeletal muscle contraction. Topics may vary from year to year. Based on review articles and research papers. Prerequisite: APB 4240 or PCB 3703 and PCB 3203 or BCH 3023.

**PCB 6175C Biological Electron Microscopy (5).** Principles and techniques of transmission and scanning electron microscopy as applied to biological materials. Lecture-laboratory combination, enrollment limited. Prerequisite: Permission of instructor.

**PCB 6235 Comparative Immunology (3).** An analysis of the immune systems and mechanisms of invertebrate and vertebrate animals. Prerequisite: Permission of instructor.

**PCB 6237 Immunogenetics (3).** The impact of classical and molecular genetic analyses on our understanding of the immune response. Prerequisite: A course in Immunology and Genetics.

**PCB 6255 Gene Expression In Animal Development (3).** Introduction to the molecular biology of animal development; DNA structure, chromatin, transcription, molecular strategies in development. Prerequisite: Permission of instructor.

**PCB 6345C Quantitative Field Ecology (6).** Methodology in the description and analysis of populations and communities. Prerequisites: Permission of instructor and STA 3123 or equivalent.

**PCB 6405 Biochemical Ecology (3).** Principles of chemical communication between diverse organisms and the importance of a variety of allelochemicals in community structure. Prerequisite: Permission of instructor.

**PCB 6526 Advanced Molecular Biology (3).** Molecular genetics, controlling mechanisms, recombinant DNA, gene splicing and gene vector construction of viral, bacterial, plant and animal systems. Prerequisite: Permission of instructor.

**PCB 6566 Chromosome Structure and Function (3).** Structural organization and function of the eukaryotic chromosome: euchromatin/heterochromatin, replication, repair, DNA sequence organization. Prerequisite: Permission of instructor.

**PCB 6786 Membrane Biophysics (3).** The structure and function of cell

membranes: ionic transport, passive electrical properties, and excitation. Prerequisite: Permission of instructor.

**PCB 6875 Trends In Neurobiology (2).** Critical analyses and discussions of selected research articles of current interests. Seminar format. Prerequisite: Permission of instructor.

**PCB 6935 Advanced Topics In Genetics (3).** An intensive study of particular genetic topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

**PCB 7675 Reproductive Immunology (3).** Molecular and cellular interactions in early development, ontogenetics, and mother and fetus. Prerequisite: Permission of instructor.

**PCB 7676 Evolution and Development of Sex (3).** Models of sexual differentiation and reproduction treated in an evolutionary context. Prerequisite: Permission of instructor.

**PCB 7689 Advanced Topics In Population and Evolutionary Genetics (3).** Comparison of the synthetic and mutational drift hypotheses; relationships between molecular and phenotypic evolutionary rates and the phenotypic effects of various forms of mutation. Prerequisite: Permission of instructor.

**ZOO 5266 Biology of Crustaceans (3).**

**ZOO 5266L Biology of Crustaceans Laboratory (1).** Morphology, physiology, systematics and evolution in crustaceans.

**ZOO 5376 Animal Design and Movement (3).** Basic biomechanical and behavioral theories of how animals feed and move. Prerequisites: BSC 1010, BSC 1011, PHY 3053, and PHY 3054 or equivalent.

**ZOO 5732 Advanced Anatomy Demonstration (1-4).** Dissection and demonstration of the human body with the emphasis on structure and function. May be repeated to a maximum of eight credits. Prerequisite: ZOO 3733L and ZOO 3734L or permission of instructor.

**ZOO 5745 Advanced Neuroanatomy (3).** In-depth knowledge of the embryonic development, structure, and function of the human nervous system with a great deal of clinical consideration. Prerequisite: ZOO 4743 or permission of instructor.

**ZOO 6378C Experimental Approaches to Functional Morphology (4).** The use of mechanical analysis, electromyography, high-speed cinematography and other experimental techniques to solve problems in functional morphology. Prerequisite: A course in Anatomy.

**ZOO 6935 Advanced Topics In Zoology (3).** An intensive study of particular topics not otherwise offered in the curriculum. May be repeated for credit with different subject content. Prerequisite: Graduate standing.

## Chemistry

**Leonard S. Keller, Professor and Chairperson**

**William Cooper, Courtesy Professor**  
**Milagros Delgado, Assistant Professor**

**Kenneth G. Furton, Assistant Professor**

**Arthur W. Herriott, Professor and Acting Dean**

**Gary G. Hoffman, Assistant Professor**  
**Rudolf Jaffe, Associate Professor**

**Jeffrey A. Joens, Associate Professor**  
**John T. Landrum, Associate Professor and Graduate Coordinator**

**Ramon Lopez de la Vega, Associate Professor**

**Howard E. Moore, Professor**  
**Kevin E. O'Shea, Assistant Professor**

**John H. Parker, Professor**  
**J. Martin Quirk, Professor**

**Stephen Winkle, Associate Professor**

## Master of Science in Chemistry

The requirements for completion of the Master of Science degree are:

A core curriculum of nine semester hours plus a minimum of three elective courses in chemistry or suitable cognate areas (including, but not limited to, physics, geology, biology, and mathematics) to be taken at the discretion of the student and at the direction of the student's Thesis Advisory Committee.

Each graduate student must also register for Graduate Seminar during each semester of study and must complete a minimum of two semester hours of graduate seminar, four semester hours of graduate research and eight semester hours of thesis research.

A grade of 'C' or higher must be obtained in all courses with a cumulative grade point average of 3.0 or higher, and a thesis must be completed and accepted after presentation to the Thesis Committee.

## Core Curriculum

CHM 5181	Special Topics in Analytical Chemistry	3
CHM 5380	Special Topics in Organic Chemistry	3
CHM 6430	Advanced Thermodynamics	3
CHM 6935	Graduate Seminar (min)	2
CHM 6910L	Graduate Research (min)	4
CHM 6970	Thesis Research (min)	8

**Elective courses: (minimum 3 required)**

CHM 5440	Kinetics and Catalysis	3
CHM 5280	Natural Products and Biosynthesis	3
CHM 5250	Organic Synthesis	3
CHM 5260	Physical Organic Chemistry	3
CHM 6511	Polymer Chemistry	3
CHM 6480	Quantum Chemistry	3
CHM 5681	Special Topics in Inorganic Chemistry	3
CHM 5581	Special Topics in Physical Chemistry	3
CHM 5490	Spectroscopy and Molecular Structure	3
CHM 5506	Physical Biochemistry	3
CHM 6461	Statistical Thermodynamics	3

## Financial Support

Full-time graduate students who are in good academic standing are eligible for financial support. Teaching and research assistantships are available on a competitive basis. Students may also apply for waiver of both In-State and Out-of-State tuition. Inquiries concerning application to the program and availability of financial support should be directed to the Chemistry Graduate Coordinator.

## Course Descriptions

*Note: Laboratories may not be taken prior to the corresponding course. Laboratories must be taken concurrently where noted. Students must register for the laboratory separately.*

## Definition of Prefixes

CHM-Chemistry; CHS-Chemistry-Specialized; ISC-Interdisciplinary Natural Sciences; OCC-Oceanography-Chemical.

**CHM 5150 Graduate Analytical Methods (3).** Analysis of analytical data, electrochemistry, spectroanalytical techniques, chromatography, survey of new analytical methods. Prerequisite: Graduate standing or permission of instructor.

**CHM 5156 Advanced Chromatography (3).** Intensive examination of the contemporary practice of chromatography including available chromatographic techniques, their selection and application. Prerequisite: CHM 4130 or permission of instructor.

**CHM 5181 Special Topics in Analytical Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Core course Prerequisite: CHM 4130 or permission of instructor.

**CHM 5225 Graduate Organic Chemistry (3).** Advanced topics in organic chemistry. Structure of organic molecules, reaction mechanisms, organic synthesis, and natural product chemistry. Prerequisite: Graduate standing or permission of instructor.

**CHM 5250 Organic Synthesis (3).** Use of classical and modern reactions in the design and construction of complex organic molecules including natural products. Some topics covered will be construction reactions, refunctionalization, stereochemistry and conformational analysis. Prerequisite: CHM 4220 or permission of instructor.

**CHM 5260 Physical Organic Chemistry (3).** A series of topics will be discussed including molecular orbital theory as it pertains to organic molecules, kinetic and thermodynamic approaches to the study of reaction mechanisms, quantitative approaches to conformational analysis, etc. Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

**CHM 5280 Natural Products Chemistry and Biosynthesis (3).** Studies of the chemical origins (biosynthesis), properties, and synthesis of the various classes of naturally occurring compounds: terpenes, steroids, alkaloids, acetogenins. Prerequisite: CHM 4220 or permission of instructor.

**CHM 5380 Special Topics in Organic Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Core course Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

**CHM 5425 Graduate Physical Chemistry (4).** Prequantum physics, the Schrodinger equation and its solutions, atoms and molecules, rotational, vibrational, and electronic spectroscopy. Prerequisite: Graduate standing or permission of instructor.

**CHM 5440 Kinetics and Catalysis (3).** Theory of elementary reactions, activated complex theory, mechanisms of complex reactions. Prerequisites: CHM 3411, MAP 3302.

**CHM 5490 Spectroscopy and Molecular Structure (3).** Introduction to atomic and molecular quantum states, selection rules, and fundamental principles of spectroscopy. Introduction to group theory and to the theory of UV/visible, infrared, Raman, microwave, nmr, photo-electron, and mass spectroscopies, and the applications of these methods to the determination of fundamental physical properties and the structure of organic and inorganic molecules. Prerequisite: Physical Chemistry.

**CHM 5490L Spectroscopy and Molecular Structure Lab (1).** The theory of spectroscopy and the use of modern instrumentation to investigate molecular structure. Prerequisites: CHM 3211, 3211L. Corequisite: PHY 4604 or CHM 5490.

**CHM 5506 Physical Biochemistry (3).** Physical properties of biomolecules, molecular conformation; thermodynamic, kinetic, and spectroscopic properties of biomolecules. Prerequisites: CHM 4207 or permission of instructor.

**CHM 5517 Solid State (3).** Crystalline form of solids, lattice dynamics, metals, insulators, semiconductors, and dielectric materials. Prerequisite: CHM 5490 or PHY 4604.

**CHM 5581 Special Topics in Physical Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 3411 or permission of instructor.

**CHM 5650 Physical Inorganic Chemistry (3).** Introduction to use of physical methods to determine the structure of inorganic compounds. Prerequisite: CHM 4610 or permission of instructor.

**CHM 5681 Special Topics in Inorganic Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 4610 or permission of instructor.

**CHM 5931 Special Topics (3).** A course covering selected special topics in chemistry.

**CHM 5932 Special Topics (3).** A course covering selected special topics in chemistry.

**CHM 6157 Advanced Analytical Chemistry (3).** Modern analytical methods, applications, and instrumentation. Topics include spectroscopy, chromatography, electrochemistry, optimization theory, and computerized instrumentation. Prerequisite: CHM 4130 or permission of instructor.

**CHM 6430 Advanced Thermodynamics (3).** The laws of classical thermodynamics and their application. Open and closed systems, irreversible processes, high and low temperature systems, solids, liquids, and gases. Core course. Prerequisite: CHM 3411 or permission of instructor.

**CHM 6461 Statistical Thermodynamics (3).** Principles of statistical thermodynamics. Ensembles, classical and quantum statistics, ideal and non-ideal gases, equilibrium, crystals, liquids, and polymers. Prerequisite: CHM 3411 or permission of instructor.

**CHM 6480 Quantum Mechanics (3).** Introduction to quantum mechanics. The Schrodinger equation and its solutions, approximation methods, spin, symmetry, structure of atoms and molecules. Prerequisite: CHM 3411 or permission of instructor.

**CHM 6511 Polymer Chemistry (3).** A quantitative study of polymers. Mechanism of formation, configuration of polymer chains, and the relationship between physical properties and chemical constitution. Prerequisite: CHM 3411 or permission of instructor.

**CHM 6905 Independent Study in Chemistry (1-6).** Independent study and problems in an area of chemistry, under faculty supervision. May be repeated. Prerequisite: Permission of instructor.

**CHM 6910L Graduate Research in Chemistry (VAR).** The student works directly with a professor on a research project. Credit is assigned on the basis of four hr/wk per credit hour. Results to be presented as a seminar. Permission of instructor.

**CHM 6935 Graduate Seminar (1).** An examination of various current research topics in chemistry. Prerequisite: Graduate standing.

**CHM 6940 Supervised Teaching (1-3).** Graduate student serves as lecturer

and demonstrator in undergraduate laboratories coordinated and supervised by a faculty member. May be repeated. A maximum of three hours may apply to the Master's degree. Prerequisite: Full graduate standing.

**CHM 6949 Industrial Internship (3).** A semester of supervised work in an outside laboratory. Prerequisite: Permission of instructor.

**CHM 6970 Thesis Research (1-10).** Research toward completion of Master's Thesis. Repeatable. Prerequisite: Permission of Department.

**CHM 6971 Master's Thesis (1-6).** Completion of thesis. Prerequisite: Permission of major professor.

**CHS 5531 Forensic Analysis (3).** An introduction to established chemical analysis techniques used in forensic science and new techniques under development. Prerequisite: CHM 3120, CHM 3120L, CHM 3211, CHM 3211L or permission of instructor.

**CHS 5531L Forensic Analysis Lab (1).** Laboratory to accompany Forensic Analysis CHS 5531. Prerequisite: CHM 3120, CHM 3120L, CHM 3211, CHM 3211L or permission of instructor.

## School of Computer Science

**Jainendra K. Navlakha, Professor and Director**

**Farah Arefi, Assistant Professor**

**Toby S. Berk, Professor and Associate Director**

**David Barton, Professor**

**John C. Comfort, Professor**

**Luis L. Cove, Assistant Professor**

**Timothy Downey, Instructor**

**Raimund Ege, Assistant Professor**

**William T. Kraynek, Associate Professor**

**Wesley F. Mackey, Lecturer**

**Masoud Milani, Associate Professor**

**Cyril U. Orji, Assistant Professor**

**Ana Pasztor, Associate Professor**

**Alexander Pellin, Associate Professor**

**Norman Pestaina, Instructor**

**N. Prabhakaran, Associate Professor**

**Naphthali Rishie, Associate Professor**

**Orlando Sauleda, Instructor**

**Wei Sun, Assistant Professor**

**Mark Weiss, Assistant Professor**

The School of Computer Science offers both a Master's of Science degree and a Doctor of Philosophy degree. The Master of Science degree provides study in state-of-the-art computer applications as well as an introduction to the theoretical foundations of computer science. The Doctor of Philosophy in Computer Science is designed to provide study in all major areas of computer science while leading to the frontiers of knowledge in a chosen field of concentration.

## Master of Science in Computer Science

### Admission

The following are in addition to the University's graduate admission requirements.

1. A Bachelor's Degree in Computer Science or equivalent degree in a related field from an accredited university or college as judged by the School's Graduate Committee.
2. A average or better in all coursework attempted while registered as an upper-division student in the Bachelor's degree.
3. Acceptable courses in Calculus and Statistics.
4. GRE score of at least 650 quantitative and 500 verbal taken within the last three years; the score on the analytic portion of the GRE exam will be considered.

5. Three letters of recommendation from persons in a position to judge the applicant's potential success in graduate study.

6. Approval of the Graduate Committee.

### Required Courses

CIS 5611	Software Engineering	3
COP 6611	Advanced Operating Systems	3
COT 5420	Theory of Computation I	3
COT 6400	Analysis of Algorithms	3
In addition, the student must choose four courses from the following list, subject to the approval of the Graduate Committee:		
CAP 5602	Introduction to Artificial Intelligence	3
CAP 5680	Expert Systems	3
CAP 5701	Advanced Computer Graphics	3
CDA 6501	Distributed Processing	3
CIS 6100	Statistical Computer Performance Evaluation	3
COP 5621	Compiler Construction	3
COT 6421	Theory of Computation II	3
COP 6545	Advanced Topics in Database Management	3
CDA 5312	Micro Processing for Software Designers	3
COP 6556	Semantics of Programming Languages	3
MAD 5405	Numerical Methods	3
MAP 6127	Simulation and Modeling	3
In addition, the student must satisfy one of the following two options:		

### Thesis Option

CIS 6970 Thesis	6
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After completion of the other required courses, the student must conduct a research thesis. The topic must first be approved by the faculty member who will supervise the research and then by the Graduate Committee. The thesis will be accepted only after being read and approved by a Reading Committee. An oral defense is required before the Reading Committee.

### Non-Thesis Option

Additional Coursework	6
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The student is required to take at additional six semester hours of approved electives. The student then must pass a comprehensive examination which may have both written and oral parts and which is based on the student's coursework. This examination may not be taken more than two times, except by permission of the Graduate Committee.

**Remarks:** The program requires a 'B' average or higher and a grade of 'C' or higher in each course. A maximum of two courses may be transferred into the program from outside the University, subject to the approval of the Graduate Committee.

## Doctor of Philosophy in Computer Science

The requirements for admission to the doctoral program in Computer Science are:

1. A baccalaureate or master degree in Computer Sciences, or equivalent degree in a related field as judged by the School's Graduate Committee.
2. Present a minimum of a 'B' average on all upper division work and acceptable courses in Calculus and Statistics.
3. GRE scores of at least 650 on the quantitative portion and 500 on the verbal portion. The GRE must have been taken within the past five years.
4. Three letters of recommendation from persons in a position to judge the applicant's potential for advanced graduate study in computer science.
5. Approval of the School of Computer Science Graduate Committee.

### Required Courses

All students must complete the following courses and receive a grade of 'B' or higher in each.

CDA 5312	Micro Processing for Software Designers	3
CDA 6501	Distributed Processing	3
CIS 5611	Software Engineering	3
COP 6545	Advanced Topics in Database Management	3
COP 6611	Advanced Operating Systems	3
COT 5420	Theory of Computation I	3
COT 6400	Analysis of Algorithms	3
COT 6421	Theory of Computation II	3
MAD 5405	Numerical Methods	3
STA 6807	Queueing and Statistical Models	3

In addition, all students

1. Must successfully pass a Qualifying Examination based on the required coursework.
2. Must take at least 12 hours of 6000-level courses approved by the Graduate Committee.
3. Must write a dissertation on their research and successfully defend it orally.
4. Must spend at least one academic year in full-time residence.

Normally, this will be after passing the Qualifying Examination.

For additional information and for specific rules and regulations relating to the above, please write to:

Dr. David Barton  
Graduate Program Director  
School of Computer Science  
Florida International University  
University Park  
Miami, Florida 33199

## Course Description

### Definition of Prefixes

CAP-Computer Applications; CDA-Computer Design/Architecture; CIS-Computer Information Systems; CGS-Computer General Studies; COC-Computer Concepts; COP-Computer Programming; COT-Computing Theory;

**CAP 5602 Introduction to Artificial Intelligence (3).** Presents the basic concepts of AI and their applications to game playing, problem solving, automated reasoning, natural language processing and expert systems. Prerequisite: COP 3530.

**CAP 5680 Expert Systems (3).** Introduction to expert systems, knowledge representation techniques and construction of expert systems. A project such as the implementation of an expert system in a high level AI-language is required. Prerequisite: COP 3530 or permission of instructor.

**CAP 5701 Advanced Computer Graphics (3).** Advanced topics in computer graphics: system architecture, interactive techniques, image synthesis, current research areas. Prerequisites: COP 3530 and CAP 3700 or equivalent, or by permission.

**CDA 5312 Micro Processing for Software Designers (3).** Design of application software for OEM products. Topics include: 16-bit microprocessor architecture and assembly language, HLLs for design of microprocessor software, software for multiprocessing and multiprocessor systems. Prerequisite: Permission of instructor.

**CDA 6501 Distributed Processing (3).** Study of distributed systems and equipment using data communications facilities. Analysis of system architecture, hardware, and software for system design. System integrity and performance issues and techniques are examined. Prerequisites: COP 6611, CDA 4500 and STA 6807.

**CDA 6939 Special Topics: Advanced Topics in Computer Architecture (3).** This course deals with selected special topics in computer architecture. Prerequisite: Permission of instructor.

**CIS 5611 Software Engineering (3).** This course deals with the design of large scale computer programs. Included are topics dealing with planning design, implementation, validation, metrics, and the management of such software projects. Prerequisite: CIS 4610.

**CIS 5900 Independent Study (1-10).** Individual conferences, assigned readings, and reports on independent investigations.

**CIS 5910 Project Research (1-6).** Advanced undergraduate or master's level research for particular projects. Repeatable. Prerequisite: Permission of Department.

**CIS 5931 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**CIS 6100 Statistical Computer Performance Evaluation (3).** An introduction of the tools for quantitative, statistical and rational design, analysis, and optimization of complex computer systems. Prerequisites: STA 6807 and COP 6611.

**CIS 6612 Special Topics: Advanced Topics in Software Engineering (3).** This course deals with selected topics in software engineering. Prerequisite: Permission of instructor.

**CIS 6931 Special Topics: Advanced Topics in Information Processing (3).** This course deals with selected special topics in information processing. Prerequisite: Permission of Instructor.

**CIS 6932 Special Topics: Advanced Topics in Numerical Methods (3).** This course deals with selected topics in numerical methods. Prerequisite: Permission of Instructor.

**CIS 6935 Seminar in Contemporary Computer Science (3).** Research Seminar in Contemporary Computer Science. Topics will vary from term to term. Prerequisite: Permission of instructor.

**CIS 6970 Thesis (1-10).** Completion of all other requirements for the M.S. Degree in Computer Science.

**CIS 7910 Graduate Research (1-25).** Doctoral research prior to candidacy.

Repeatable. Prerequisite: Permission of Department.

**CIS 7980 Ph.D. Thesis (1-10).** Prerequisite: Permission of Instructor.

**COP 5621 Compiler Construction (3).** Basic techniques of compilation; self-compilers; syntax encoding and recognition; code generation and optimization. Prerequisites: MAD 3512 and CIS 4610.

**COP 6611 Advanced Operating Systems (3).** Topics in operating system design: concurrent scheduling, security and protection, virtualizable architectures and monitors. Prerequisite: COP 4610.

**COP 6545 Advanced Topics in Database Management (3).** Architecture and implementation aspects of DBMS; Distributed databases; Semantic models; advanced database languages, including Prolog-like languages; Semantic aspects of databases; Database machines. Prerequisite: COP 4540.

**COP 6556 Semantics of Programming Languages (3).** This course provides an overview of systematic and effective approaches to programming. Abstraction; formal specification techniques; program verification and semantics of programming languages. Prerequisite: COT 5420.

**COT 5420 Theory of Computation I (3).** Abstract models of computation; halting problem; decidability and undecidability; recursive function theory. Prerequisite: MAD 3512.

**COT 5936 Topics in Algorithms (3).** Advanced data structures, pattern matching algorithms, file compression, cryptography, computational geometry, numerical algorithms, combinatorial optimization algorithms and additional topics. Prerequisite: COP 3530.

**COT 6400 Analysis of Algorithms (3).** Complexity behavior of algorithms is described for Set Manipulation, Graph Theory, and Matrix Manipulation problems, among others. P and NP classes of problems reveal an inherent difficulty in designing efficient algorithms. Prerequisite: COP 3530.

**COT 6421 Theory of Computation II (3).** Verification of program correctness; program schemes; fixed-point theory of programs; resolution and theorem proving. Prerequisite: COT 5420.

**COT 6930 Special Topics: Advanced Topics in Theory (3).** This course deals with selected special topics in

computing theory. Prerequisite: Permission of instructor.

**MAP 6127 Simulation and Modeling (3).** Two areas are covered in this course: advanced queueing models and simulation techniques. The relationships between these two areas, applications, and simulation languages will be among the topics covered. Prerequisites: COP 3530; and MAP 5117 or STA 6807.

## Creative Writing

Asher Z. Milbauer, Associate Professor and Chairperson

Lester Standiford, Professor and Director, Creative Writing

Lynne Barrett, Associate Professor  
John Dufresne, Assistant Professor  
James W. Hall, Professor

### Master of Fine Arts in Creative Writing

The Master of Fine Arts in Creative Writing is the terminal degree for the practicing writer, designed to qualify the recipient to teach creative writing on the collegiate and university level. The program is housed at the North Miami Campus. Writers enjoy the opportunity for editorial experience on *Gulf Stream* magazine, the annual FIU literary Awards competition, the FIU Writers Workshop, the Miami Book Competition, and the Writers on the Bay Series, which has included residencies by such writers as Carolyn Forché, Louis Simpson, John Wideman, Elmore Leonard, James Crumley, Luis A. Valenzuela, Tony Hillerman, and Henry Taylor. Such major writers as James Jones and George Garrett have served on the regular faculty.

### Admission Requirements

Applicants must have a baccalaureate degree, a 3.0 GPA or a 1000 combined score on the GRE, and a minimum of nine semester hours of undergraduate work in creative writing. However, admission is based primarily on the strength of the applicant's submitted writing sample.

### Degree Requirements

Forty eight semester hours are required in studio/academic curriculum, with a minimum in each area as follows:

Literature	15
Writing Workshop	18
Form and Theory	3
Thesis	6

There is no foreign language requirement. Graduate workshops include short fiction, the novel, popular fiction, screenwriting, creative non-fiction and poetry. The program places emphasis upon the preparation and completion of a book-length creative thesis.

Fellowships, teaching assistantships, and tuition remission scholarships are available on a competitive basis.

## Course Descriptions

### Definition of Prefixes

CRW-Creative Writing; ENG-English.

**CRW 5130 Advanced Fiction Workshop (5).** Practice in the techniques and analysis of fiction through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

**CRW 5331 Advanced Poetry Workshop (5).** Practice in the techniques and analysis of poetry through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

**CRW 5620 Advanced Screenwriting Workshop (5).** Practice in the techniques and analysis of screenwriting through the reading, discussion, and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: 9 hours undergraduate CRW coursework.

**CRW 5934 Special Topics in Creative Writing (1-5).** A course designed to give students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated.

**CRW 5935 Special Topics in Creative Writing (1-5).** Gives students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisites: CRW 2001 and three hours of CRW on the 3000/4000 level.

**CRW 5940 Advanced Independent Study in Creative Writing (1-5).** Development and completion of a graduate level independent project in creative writing undertaken with the consent of the instructor. Prerequisite: Graduate standing and instructor permission.

**CRW 6971 Creative Writing Thesis (3).** Research and writing for the crea-

tive writing thesis. May be repeated.  
Prerequisite: 12 hours graduate CRW coursework.

**ENG 5058 Form and Theory of Contemporary Literature (3).** Various approaches and theories of practice in the major genres of imaginative writing, including development and articulation of the creative esthetic. May be repeated.  
Prerequisite: Permission of instructor.

## Economics

**Raul Moncarz, Professor and  
Chairperson**

**Hassan Arvin-Rad, Assistant Professor**

**Manuel J. Carvajal, Professor**

**Robert Cruz, Assistant Professor**

**Irma de Alonso, Associate Professor  
and Graduate Program Coordinator**

**Maria Dolores Espino, Assistant  
Professor**

**Timothy Goodspeed, Assistant  
Professor**

**Antonio Jorge, Professor of Political  
Economy**

**All Cem Karayalcin, Assistant  
Professor**

**Bruce Kelley, Assistant Professor**

**Panagis Liosatos, Professor**

**J. Kenneth Lipner, Assistant Professor**

**Jorge Salazar-Carrillo, Professor and  
Director, Center for Economic  
Research and Education**

**Carlos Sevilla, Assistant Professor**

**Mira Wilkins, Professor**

**Maria Willumsen, Assistant Professor**

The graduate programs in Economics are designed to offer advanced training in economic analysis and provide students with an opportunity to focus their graduate studies in the areas of development economics, international economics and the economics of Latin America and the Caribbean. While these are the Department's areas of greatest emphasis, graduate coursework in other fields can also be undertaken. The department's programs are further enhanced by the presence of complementary graduate programs in the College of Arts and Sciences, College of Business Administration, and the School of Public Affairs.

## Master of Arts in Economics

To be admitted into the Master's degree program in Economics, a student

must meet the University's graduate admission requirements and:

1. Have a 'B' average (3.0) or higher during the last two years of undergraduate studies, or a combined score (verbal, quantitative, and analytic) of 1,500 or higher on the three-part GRE, which every candidate must take. (If a student has taken the Graduate Record Examination before the new system was introduced and scored 1000 or higher on the combined verbal and quantitative sections, the student does not have to retake the examination.) Foreign students whose native language is not English must take the TOEFL and obtain a score of 500 or higher.

2. Receive approval of the departmental graduate committee.

3. Have taken as prerequisites intermediate microeconomics, intermediate macroeconomics, statistics, and calculus. A student who has not fulfilled all these prerequisites may be admitted on a provisional basis. Unless specifically exempted, the student must take these courses as required, obtaining no credit for them in the program.

### Degree Requirements

The Master's degree program will consist of 30 semester hours of course work, at a graduate level (course numbers 5000 or above). A maximum of six semester hours may be transferred into the program subject to the approval of the graduate committee. All courses listed below carry 3 credits, except the thesis (6 credits). The specific requirements are:

### Core Semester Hours

ECO 7115	Microeconomic Theory I	3
ECO 7206	Macroeconomic Theory I	3
ECO 7424	Econometric Methods I	3

### Additional Requirements: (12-15)

Students will be required to write a thesis for 6 credits, (ECO 6971), or take the advanced seminar in applied economics (ECO 6939), which involves writing a research paper.

### Electives: (15-18)

A student must take at least four electives in Economics. The additional one or two courses required to complete the Master's program may be taken in Mathematics, International Studies, the College of Business Administration, the School of Public Affairs and Services, or in the other college or schools of the University. The graduate committee must approve courses taken outside the department.

## Graduation Requirements

To receive the Master's degree in Economics, the student must complete 30 hours of course work with a 'B' (3.0) average or higher; must receive a least a 'B' (3.0) in the core courses; and must receive a grade of 'C' or higher in each course. If the student decides to write a thesis, he must receive the grade of 'P'(pass) for ECO 6971.

## Doctor of Philosophy in Economics

The requirements for admission to the doctoral program in Economics are:

1. A baccalaureate degree from an accredited university or college.

2. A minimum GPA of 3.0 from the last two years of the undergraduate education or a minimum score of 1650 on the three-part GRE (which every candidate must take). Foreign students whose native language is not English must take the TOEFL and obtain a score of 550 or higher.

3. Three letters of recommendation from persons in a position to judge the applicant's suitability for graduate study in economics.

4. Approval of the Graduate Studies Committee of the Department of Economics.

5. Approval of the following courses at the undergraduate level: Intermediate Microeconomics, Intermediate Macroeconomics, Statistics, and Calculus. Unless specifically exempted, students must take these courses as required. No graduate credit will be awarded for these courses. These courses are prerequisites for most graduate courses and students cannot take the latter unless they take the prerequisites, or are specifically exempted by the instructor of the course.

The Ph.D. program is independent of the existing master's program in Economics and students in that program must apply for admission as Ph.D. students. Certain courses taken in the master's program, however, may be transferred and used to fulfill the requirements of the Ph.D. program, with the approval of the Graduate Studies Committee.

### Degree Requirements

To obtain the Ph.D. in Economics, students must complete the required coursework and fulfill dissertation requirements.

### Coursework Requirements

Students must complete 48 hours (16 courses) of graduate level coursework. Supervised research, independent study

ies, seminars, and dissertation credit do not count towards this objective.

This required minimum of 16 courses consists of eight courses in the Core, six courses in three Fields of Specialization (at least two courses per field, some fields may have special requirements), and two electives as approved by the student's advisor who will be assigned to the student at the time of admission to the program.

#### Core Courses

ECO 7115	Microeconomic Theory I	3
ECO 7116	Microeconomic Theory II	3
ECO 7206	Macroeconomic Theory I	3
ECO 7207	Macroeconomic Theory II	3
ECO 7405	Mathematical Methods in Economic Analysis	3
ECO 7424	Econometric Methods I	3
ECO 7425	Econometric Methods II	3
ECO 7305	History of Economic Thought	3

#### Fields of Specialization

Advanced Economic Theory  
Economic Development  
Economics of Human Resources  
Economics of Latin America and the Caribbean  
International Economics  
Monetary Economics  
Urban and Regional Economics

#### First Year of Graduate Study

Students are required to take courses, which must at least include the first six courses in the core as listed above. At the end of the year, students are required to pass a comprehensive qualifying examination on core theory - the first four of the core courses listed above. A student who fails twice will not be allowed to remain in the program.

#### Second Year of Graduate Study

Students will be required to take Econometric Methods II (with research paper), History of Economic Thought, and complete coursework in two major fields of specialization. The designation major field is to indicate a chosen field in which students must pass field examinations by the end of the second year. In contrast, the term minor field designates a chosen area that does not require a field examination and the courses of which do not have to be taken by the second year. Students who fail twice any of their field examinations will not be allowed to continue in that field.

#### Dissertation Work

Upon completion of field examination requirements, students will be required to choose a specific area of doctoral research. During this phase, which will normally have a total length of two years, the student will:

- Conduct research and complete a dissertation,
- Continue taking courses,
- Attend Advanced Workshops by enrolling in ECO 7925 in the dissertation area and present at least one paper a year on the work in that workshop.

Students will normally be required to be enrolled as full-time students at the University for at least a year during the dissertation period. Except under abnormal circumstances, the maximum number of years during which a student may do dissertation work is five years.

#### Graduation Requirements

To graduate, students must complete all course requirements; fulfill workshop presentation requirements, pass the comprehensive and field examinations, and complete the oral defense and acceptance of the Ph.D. dissertation.

#### Course Descriptions

##### Definition of Prefixes

ECO-Economics; ECP-Economic Problems and Policy; ECS-Economic Systems and Development.

**ECO 5709 The World Economy (3).** Designed to give an overview of the crucial issues in the world economy. The course covers trade, capital, labor, and technology flows; transnational economic organizations; current economic crisis; global economic interdependence; and the nature and characteristics of international economic order. Required for MIB Program.

**ECO 5735 Multinational Corporations (3).** Economic theory and multinational corporations. Economic effects. Consequences of nationalization. Spread of the multinational form. State-owned multinational corporations. Prerequisite: Permission of instructor for undergraduates.

**ECO 5906 Advanced Individual Study (3).** Supervised readings, individual tutorial, and preparation of report. Requires consent of faculty supervisor and Department Chairperson. Open to seniors and graduate students.

**ECO 5945 Internship (3).** Directed individual study which assigns the student in using economic analysis in his

employment. Prerequisite: Permission of the instructor.

**ECO 6936 Special Topics (3).** A course designed to give students a particular topic or a limited number of topics not otherwise offered in the curriculum.

**ECO 6938 Individual Graduate Study (6-9).** Supervised readings, tutorial, and preparation of report. Open only to graduate students. Requires consent of supervisor and approval of Department Chairperson.

**ECO 6939 Advanced Seminar In Applied Economics (3).** Variable-topic study group in application of economic analysis to specific problems. Open to seniors and graduate students.

**ECO 6971 Thesis (6).** Writing and completion of thesis by candidate for a Master of Arts. Prerequisites: Student must be a Master's degree candidate, have had at least 15 hours of graduate work in economics; have a thesis topic approved by the Department's Graduate Committee and permission from the instructor.

**ECO 7115 Microeconomic Theory I (3).** Models of consumer and producer behavior, partial equilibrium analysis of product and factor markets, two-sector models of general equilibrium and welfare economics. Prerequisites: ECO 3101 or equivalent, Calculus I; Calculus II recommended.

**ECO 7116 Microeconomic Theory II (3).** The Hicks/Samuelson and Arrow/Debreu models of general equilibrium. Activity analysis and competitive equilibrium. Capital theory. Leontief/Sraffa/Marx Systems. Temporary equilibrium and money. Prerequisites: ECO 7115 and ECO 7405.

**ECO 7118 Graduate Seminar In Economic Theory (3).** Variable-topic graduate study group in theoretical problems. Open only to students with graduate standing.

**ECO 7135 Growth, Distribution and Prices (3).** Alternative theories of growth, income distribution and prices. Basic growth models; neoclassical capital theory and Cambridge controversies; neo/Marxian, neo/Keynesian and other approaches. Prerequisites: ECO 7116, ECO 7207, ECO 7405.

**ECO 7136 Classical and Marxian Economic Theory (3).** Classical and Marxian theories of value and capital in a mathematical mode. The Transformation Problem. Simple and expanded reproduction. The falling rate of profit



and other Marxian crises. Prerequisite: ECO 7115, ECO 7206, ECO 7405, ECO 7116.

**ECO 7206 Macroeconomic Theory I (3).** Analysis of macroeconomic models of income determination and the price level, microeconomic foundations of macro-behavior, macroeconomic models, and basic open economy macroeconomics. Prerequisites: ECO 3203, ECO 4410, or equivalents; Calculus I; Calculus II recommended.

**ECO 7207 Macroeconomic Theory II (3).** Alternative approaches to macroeconomic theory. Business cycle theories and theories of growth and income distribution. Prerequisites: ECO 7115, ECO 7206, ECO 7405.

**ECO 7216 Monetary Theory and Policy (3).** Relationship of money supply and interest rate to economic stabilization. Consideration of federal reserve system, money market, and factors determining money supply and demand. Neo-Keynesian, Chicago, and radical policy views.

**ECO 7236 Money, Banking, and Monetary Policy (3).** Monetary theory and its application. Consideration of central banking in the U.S. and its relation to the international economy, money markets, and financial intermediaries. Survey of current policy views.

**ECO 7305 History of Economic Thought (3).** Exploration of the evolution of economic thought and analysis in the changing socio/historical, institutional and political setting in which it takes place. Prerequisite: Permission of instructor.

**ECO 7405 Mathematical Methods in Economic Analysis (3).** Application of mathematical methods to economics. The topics and tools of mathematical economics are presented in a rigorous fashion within an economic context. Prerequisites: Calculus I, ECO 3101 and ECO 3203, or equivalents.

**ECO 7424 Econometric Methods I (3).** Practical and theoretical foundations of empirical economics. Knowledge in formulation, estimation, and evaluation of econometric models. Prerequisites: ECO 4410 or equivalent; ECO 7423, Calculus I; Calculus II recommended.

**ECO 7425 Econometric Methods II (3).** A continuation of ECO 7424. Advanced single equation estimation, estimation of distributed lags, simultaneous equations, time series and models of qualitative choice. Prerequisite:

ECO 7424 and MAS 3103 or equivalent.

**ECO 7505 Public Finance (3).** Partial and general equilibrium analysis of tax incidence efficiency, public goods, public pricing problems, the social rate of discount, and non-market decision making.

**ECO 7617 Seminar in Economic History (3).** Topics in economic history, exploration of the economic history literature on a selected theme, student presentations. Prerequisite: Permission of instructor for undergraduates.

**ECO 7705 International Trade (3).** Positive and normative aspects of international trade. Theories of comparative advantage, commercial policy, trade and income distribution. Prerequisites: Advanced Microeconomic Theory; Calculus.

**ECO 7716 International Money (3).** Theory of international monetary equilibrium. Problems of international payments and exchange rate control; their effect on international monetary problems. Analysis of short and long term monetary flows and macroeconomic adjustment. Prerequisites: Advanced Macroeconomics and Calculus.

**ECO 7925 Advanced Workshop (3).** Enables students to attend advanced workshop presentations and to present the results of their own research. Prerequisite: Completion of field examination requirements.

**ECO 7980 Dissertation (Ph.D.) (1-6).** To be taken every semester for research on, and writing of Ph.D. dissertation by candidates for the Ph.D. Prerequisite: Completion of field examination requirements.

**ECP 6605 Urban and Regional Analysis (3).** Application of economic analysis to urban growth and the urban-regional environment. Consideration of public services, transportation, ghetto problems, and urban organization. Analysis of environmental protection problems and policies. Recommended preparation: ECO 3101, ECO 3203 and ECP 3303.

**ECP 6705 Managerial Economics (3).** Basic microeconomic concepts as they apply to decision making within the organization; supply and demand; market structure and market behavior in specific industries. Prerequisites: ECO 3021 and ECO 3011.

**ECP 6715 Macroeconomic Forecasting for Management (3).** Basic macro-

economics concepts as they apply to decision making within the firm. Traditional models of income determination and forecasting analysis. Prerequisite: ECP 6705.

**ECP 7035 Cost-Benefit Analysis (3).** This course covers benefit-cost analysis, cost-effectiveness analysis, benefit-risk analysis, risk-risk analysis, and systems analysis. All of these techniques are designed to provide guidance to decision makers, particularly in the government sector. Prerequisite: ECO 3101.

**ECP 7205 Labor and Human Resources (3).** Empirical and theoretical analysis of the factors determining employment and earnings, recent developments in the theory of labor supply, critiques of neoclassical theory, and current issues in public policy. Prerequisite: Calculus.

**ECP 7405 Industrial Organization (3).** The organization of the industrial economy with particular emphasis as to the type of competition, the bases of monopoly power and the extent of monopoly power. Prerequisites: Advanced Micro and Calculus.

**ECP 7606 Urban and Regional Economics (3).** The economics of urbanization processes, internal organization of cities, and regional settlement. Spatial growth models and spatial development planning. Prerequisites: ECO 7115, ECO 5205, ECS 4013 or equivalent; and ECO 6636.

**ECP 7636 Location Theory (3).** Systematic exposition of urban and industrial location theory. Spatial price theory and spatial competition. Prerequisites: ECO 3101 or equivalent; Calculus I; Calculus II and ECO 7115 recommended.

**ECP 7706 Managerial Economics (3).** Analysis of the economic decisions of firm managers, emphasizing the practical application of concepts to economic problem solving by managers, public administrators and other decision makers. Prerequisites: Ph.D. or advanced Masters.

**ECS 5005 Comparative Economic Systems (3).** A critical evaluation of the design, goals, and achievements of economic policies in capitalist and socialist economies. Prerequisite: Permission of Instructor for undergraduates.

**ECS 5025 Economic Planning (3).** Analysis of planning methods in capitalist and socialist economies. Evaluation of macro and micro

economic planning tools (input-output) and programming techniques. Theory and practice of economic development planning of agriculture, industrialization, foreign trade, and manpower. Prerequisite: Graduate standing or permission of the instructor.

**ECS 5027 Economic Development of Emerging Nations (3).** Specific economic problems of emerging nations and national groupings. Basic approaches to economic development; major proposals for accelerating development. Role of planning. Trade, aid, and economic integration.

**ECS 6436 The Economics of Caribbean Migration (3).** The course examines the economic causes and consequences of Caribbean immigration to the United States. Special emphasis on the effects of Caribbean migration on the United States economy.

**ECS 7015 Development Economics: Theory (3).** Analytical approaches to economic development. Analysis of macro models, specific resources and sectors, and trade and income distributional problems in relation to developing countries. Prerequisites: ECO 7115 and ECO 7116 or equivalents.

**ECS 7026 Development Economics: Planning and Policy (3).** Planning and policy making in developing economies. Economy-wide planning models; project appraisal; financial, stabilization and trade policies. Prerequisites: ECO 7115, ECO 7116, and ECO 7405.

**ECS 7405 Economics of Latin America (3).** Dependence, population explosion, urban migration, agricultural reform, industrialization and import substitution, common markets. Prerequisite: Permission of instructor for undergraduates.

**ECS 7435 Economics of the Caribbean (3).** Macroeconomic assessment; income distribution, employment and migration; industrial and agricultural development; international trade, multinational and integration attempts. Prerequisite: Permission of instructor.

**ECS 7445 Economics of Central America (3).** Recent economic events in the region dealing with institutional background and structure of current economic activities. Special emphasis on problems of growth, social transformation and economic integration. Prerequisite: Permission of instructor.

## English

**Asher Z. Milbauer, Associate Professor and Chairperson**  
**Harry T. Antrim, Professor**  
**St. George Tucker Arnold, Associate Professor**

**Lyne Barrett, Associate Professor**  
**Lynn M. Berk, Associate Professor**  
**Gisela Casnes, Associate Professor**  
**Maneck Daruwala, Associate Professor**

**John Dufresne, Assistant Professor**  
**Charles Elkins, Professor**  
**Mary Jane Elkins, Associate Professor**

**Peggy Endel, Associate Professor**  
**John Ernest, Assistant Professor**  
**Mary Free, Associate Professor**  
**Virginia Gathercole, Associate Professor**

**James Hall, Professor**  
**Tometro Hopkins, Instructor**  
**Peter Hargata, Instructor**  
**Barbara Kline, Assistant Professor**  
**Jeffrey Knapp, Instructor**

**Kenneth Johnson, Associate Professor**  
**Kathleen McCormack, Associate Professor**

**Carmela Pinto McIntire, Associate Professor**  
**Adele S. Newson, Associate Professor**  
**Shella Post-Lauria, Assistant Professor**

**Robert Ratner, Instructor**  
**Mari-Jane Rochelson, Assistant Professor**  
**Richard Schwartz, Associate Professor**

**Ronn Silverstein, Instructor**  
**Ellen Sprechman, Lecturer**  
**Lester Standiford, Professor**  
**Richard Sugg, Professor**  
**Donald Watson, Professor**  
**Butler H. Waugh, Professor**  
**Robert Weinberger, Instructor**  
**Barbara Weltz, Instructor**  
**C. Kemp Williams, Assistant Professor**  
**Mehmet Yavas, Associate Professor**

The English Department offers two graduate degree programs: Creative Writing and Linguistics. See the description of the programs and their graduate course offerings under Creative Writing and Linguistics.

Below is a list of graduate courses offered by the English Department.

## Course Descriptions

### Definition of Prefixes

AML - American Literature; CRW - Creative Writing; ENG - English-General; ENL - English Literature; LIN - Linguistics; LIT - Literature.

**AML 5305 Major American Literary Figures (3).** Each section will consider the lifework of several authors such as Hawthorne, Melville, Whitman, Twain, James, Faulkner, Mailer, Wright, Baldwin. May be repeated.

**AML 5505 Periods in American Literature (3).** The literature and criticism regarding one specified period of American Literature, such as Colonial, Federal, Transcendental, Antebellum, and Twentieth Century. May be repeated with change of period. Prerequisite: Permission of instructor.

**CRW 5940 Advanced Independent Study in Creative Writing (1-5).** Development and completion of a graduate level independent project in creative writing undertaken with the consent of the instructor. Prerequisite: Graduate standing and instructor permission.

**ENG 5009 Literary Criticism and Scholarship (3).** Techniques and goals of humanistic research, bibliography, and critical commentary.

**ENG 5018 Practical Criticism (3).** Applies various critical theories - e.g. the formalistic, historical, structural, archetypal, sociological, etc. - to specific literary productions.

**ENG 5058 Form and Theory of Contemporary Literature (3).** Various approaches and theories of practice in the major genres of imaginative writing, including development and articulation of the creative esthetic. May be repeated. Prerequisite: Permission of instructor.

**ENG 5907 Independent Study (VAR).** Individual conferences, assigned readings, reports on independent investigations, with the consent of the Chairperson.

**ENG 6909 Independent Study (VAR).** Individual conferences, assigned readings, reports on independent investigations, with the consent of the Chairperson.

**ENL 5220 Major British Literary Figures (3).** Each section will consider the lifework of an author such as Chaucer, Spenser, Milton, Pope, Wordsworth, Dickens, Browning, Joyce, or others. May be repeated.

**ENL 5505 Periods in English Literature (3).** The literature and criticism regarding one specified period of English Literature, such as Medieval, Renaissance, Victorian, Twentieth Century, and Contemporary. May be repeated with change of period. Prerequisite: Permission of instructor.

**LIT 5363 Literary Movements (3).** Individual sections will study the authors, works, and audiences involved in such phenomena as Humanism, Mannerism, Romanticism, Symbolism, the Harlem Renaissance, and others. May be repeated.

**LIT 5934 Special Topics (3).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

**LIT 6934 Special Topics (3).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

## Geology

**Grenville Draper, Professor and Chairperson**

**Bradford Clement, Associate Professor**

**Charles Connor, Associate Professor**  
**Rosemary Hickey-Vargas, Associate Professor**

**Jose Longoria, Professor**  
**Andrew Macfarlane, Assistant Professor**

**Florentin Maurrasse, Professor**  
**Claudia Owen, Lecturer**

**Gautam Sen, Associate Professor**  
**Edward Robinson, Research Associate**

**Martha Gampier-Longoria, Research Associate**

The Masters of Science program in Geology prepares students for careers in research, teaching and as geoscientists and environmental specialists in the public or private sector. Research and instruction in the Department seeks to contribute to a better understanding of geological processes and problems especially as they relate to the South Florida and the Caribbean/Latin American regions. Well equipped laboratories expose students to the latest instruments and techniques. B.S. and B.A. degrees are offered at the undergraduate level, as is a minor in Geology.

ferred at the undergraduate level, as is a minor in Geology.

## Master of Science in Geology Admission

To be admitted to the Master's degree program in Geology, a student must meet the following minimum requirements:

1. Satisfactorily meet the University's general requirements for admission.
2. Hold a Bachelor's degree, or equivalent in a relevant discipline of Sciences or Mathematics. A maximum of 4-credit hours of advanced undergraduate course work will be allowed to count toward the Master's degree. Students entering with a Bachelor's degree in chemistry whose graduate work will be mainly in geochemistry/petrology, or students entering with a Bachelor's degree in Physics or Mathematics whose graduate work will be mainly in geophysics should take advanced test (GRE) in the field of undergraduate specialization.
3. Have a grade point average (GPA) of 3.0 or higher (or equivalent) during the last two years of undergraduate program, and a minimum combined score of 1000 in the verbal and quantitative parts of the Graduate Record Examination.
4. Students whose native language is other than English must demonstrate adequate level of proficiency in English as a foreign language. An equivalent score of 500 on the TOEFL (Test of English as a Foreign Language), of the Educational Testing Service is required. Foreign students who have not met this requirement may be conditionally admitted and allowed to enroll in an intensive English Program prior to beginning course work in Geology. Satisfactory English proficiency must be demonstrated within the first year of study.

## Application Procedures

Admission decisions to the Program will be made by the Department's Graduate Admission Committee.

To be considered for admission applicants must submit the following documents prior to the term in which they are seeking admission:

1. FIU Graduate Application Form.
2. Certified transcripts of all college level work. When applicable, a certified English translation must accompany the original.
3. Graduate Record Examination scores taken within the previous two years.

4. Scores of English Proficiency, when applicable.

5. Curriculum vitae or resume with pertinent information regarding applicant's previous experience and achievements.

6. A statement of intent, including a brief discussion (not to exceed 2000 words, including space) of educational goals and career projections. Applicant may also include a copy of previous written scientific work.

7. Three letters of recommendation from former professors or academic advisors. Applicants must also comply with deadlines set by the University for consideration for admission in the upcoming semester.

## Degree Requirements

### Program of Study

Introductory meetings with faculty members of the department are arranged for all incoming graduate students and a program of study is planned as early as possible after discussion with the chairperson of the Graduate Admission Committee.

### Required Courses

A minimum of 28 credits within the Department, including:

GLY 5931/GLY 6931 Graduate Seminars	2
GLY 5286 Research Instrumentation and Techniques in Geology	4
Courses in field of specialization	16
GLY 6971 Thesis	12
Electives	8

Courses in the field of concentration and electives are chosen by the student in consultation with an advisor. All such courses are selected to fit the student's particular professional goals.

### Foreign Language Competency

All students are required to have a reading knowledge of a modern foreign language. Competency will be determined by an examination which will consist of a clear translation into English of a technical paper from French, Spanish, German or Russian. Courses taken to gain such proficiency will not be counted toward graduation. As an alternative, students may substitute 6 credits of Computer Science or Mathematics beyond Calculus II.

### Fields of Concentration

#### Petrology - Geochemistry

Field, analytical and experimental research in petrology/geochemistry of igneous rocks. Application of phase equilibria, and major element trace element and isotope systematics to the in-

interpretation of the origin and chemical evolution of the upper mantle and magmas. Study areas include Hawaii, Chile, the Caribbean islands, the Bonin-Mariana arc-basin system and India.

### Paleontology

Biostratigraphic analyses of major fossil groups and their application to universal problems of earth history as can be exemplified in Florida, the Caribbean and South America. Analyses of general problems of animal extinction, paleoecology of specific groups, evolution, and computer programs in paleontology. The department's Caribbean Geological Collection includes the most comprehensive stratigraphic sections of the region to carry our stratigraphic analyses.

### Stratigraphy - Sedimentation

Research on lithostratigraphy and facies analysis of sedimentary rocks of South Florida and the circum Caribbean region. Tectonic evolution and paleoecology of sedimentary basins of these regions and their relationships to global and regional tectonic processes. Hydrocarbon assessment of potential source of rocks.

### Structural Geology - Tectonics

Analysis of geologic deformation as it occurs from the microscopic to the regional scale, based on the principles of continuum mechanics and rock rheology. Geometry and dynamics of major types of structures. Structural analysis and tectonic synthesis. Field oriented investigations in the circum Caribbean region.

### Geophysics

Application of geophysical methods to the investigation of current problems in the Earth Sciences. Likely thesis topics include: analysis of regional gravity, aeromagnetic and related potential field data from Mexico and the circum Caribbean, paleomagnetic stratigraphy and plate reconstruction, geophysical volcanology. Coursework will cover topics in geophysical principles, field methods and data analysis.

### Regional and Applied Geology

Tailored to student's professional needs including options in Environmental Geology, Hydrogeology and General Geology. Such options are multidisciplinary in nature and will involve courses from other science departments and engineering.

### Graduation Requirements

1. A minimum GPA of 3.0 in all course work required for the master's degree.

2. Satisfactory performance on qualifying examinations on general geologic skills and field of sub-specialization. Failure to pass this examination will terminate the student's admission in the program.

3. Completion and successful defense of a thesis. Members of the Thesis committee will be jointly determined by the student's advisor and the Graduate Admission Committee.

### Participation in Instructional Activities

All students in the program are required to participate in instructional aspects of the Department as teaching assistants. Specific assignments may include supervision of laboratories, assistance on field trips, or curatorial duties.

### Course Descriptions

*Note: Laboratories may not be taken prior to the corresponding lecture course. Laboratories must be taken concurrently where noted, but students must register for the laboratory separately.*

#### Definition of Prefixes

EVS-Environmental Science; GEO-Geography/Systematic; GLY-Geology; MET-Meteorology; OCE-Oceanography; OCG-Oceanography-Geological; OCP-Oceanography/Physical.

**GLY 5021 Earth Sciences for Teachers (3).** Study of geological materials and processes, as covered in Physical Geology, but at a higher level and with additional assignments. Prerequisite: Permission of instructor. Corequisite: GLY 5021L.

**GLY 5021L Earth Sciences for Teachers Laboratory (1).** Study of the properties of minerals and rocks; interpretation of topographic and geologic maps; study of the geology of Florida, including field trips. Prerequisite: Permission of instructor. Corequisite: GLY 5021.

**GLY 5158 Florida Geology (4).** Detailed lithostratigraphic and biostratigraphic analyses of Southeast Florida and their relationship to tectonics, paleoclimates. Prerequisite: GLY 5695 or permission of instructor.

**GLY 5246 Geochemistry (3).**  
**GLY 5246L Geochemistry Lab (1).** Origin of chemical elements and principles affecting their distribution in the solar system, solid earth and hydrosphere. Use of chemical data to solve

geologic problems. Prerequisites: Physical Geology and General Chemistry

**GLY 5286 Research Instrumentation and Techniques In Geology (3).** Survey of techniques and instrumentation used in geological research, including computing and data handling. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286L.

**GLY 5286L Research Instrumentation and Techniques In Geology Lab (1).** Introduction to advanced instrumentation and analytical techniques in Geology, including computing and data processing. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286.

**GLY 5298 Topics In Geochemistry (3).** Seminar covering current research in selected areas of low-temperature geochemistry: oceans and oceanic sediments; continental waters and sediments; hydrothermal systems. Prerequisite: GLY 4555 or permission of instructor.

**GLY 5322 Igneous Petrology and Geochemistry (3).** Presentation and discussion of current topics in igneous petrology and geochemistry in a seminar format. Prerequisite: Permission of instructor.

**GLY 5335 Metamorphic Geology (3).** Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths.

**GLY 5335L Metamorphic Geology Lab (1).** Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths.

**GLY 5346 Sedimentary Petrology (3).** Systematic study of sedimentary rocks. Special emphasis on petrological aspects, geochemistry, paleontology, mineralogy, and microlites. Emphasizes microscopic study. Prerequisite: GLY 4555. Corequisite: GLY 5346L.

**GLY 5346L Sedimentary Petrology Lab (1).** Laboratory studies of sediments and sedimentary rocks with emphasis on microscopic analyses and geochemical techniques. Prerequisite: GLY 4555 and GLY 4555L. Corequisite: GLY 5346.

**GLY 5408 Advanced Structural Geology (3).** Advanced treatment of the theory of rock mechanics to solve

problems solve natural rock deformation. Prerequisites: GLY 4400, MAC 3413, or permission of instructor. Corequisite: GLY 5409L.

**GLY 5408L Advanced Structural Geology Lab (1).** Problem solving in theory of rock deformation. Experimental procedures in rock mechanics. Corequisite: GLY 5408.

**GLY 5425 Tectonics (3).** Properties of the lithosphere; plate kinematics and continental drift; characteristics of plate boundaries; mountain belts; formation of sedimentary basins. Prerequisites: GLY 1010, 1100, 4400, 4310, 3200 or permission of instructor.

**GLY 5446 Topics In Structural Geology and Tectonics (3).** Selected advanced topics in structural geology and rock deformation. Latest advances in crustal tectonics. Prerequisite: GLY 5408.

**GLY 5455 Physical Volcanology (3).** Description of volcanoes and their products, geophysical and tectonic constraints on volcanic processes, and modeling and forecasting of volcanic eruptions. Prerequisite: GLY 4450, GLY 4310 or permission of instructor.

**GLY 5457 Analysis of Geophysical Data (3).** Reduction and interpretation of geophysical data, including time series analysis, continuation of potential fields. Three-dimensional modeling of gravity, magnetic data, integrated geophysical surveys. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457L.

**GLY 5457L Analysis of Geophysical Data Lab (1).** Field and laboratory applications of geophysical techniques. Computer aided analysis and three-dimensional modeling of gravity and magnetic data. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457.

**GLY 5495 Seminar In Geophysics (3).** Detailed investigation of current geophysical techniques, including topics on instrument design. Prerequisite: GLY 5457 or permission of instructor.

**GLY 5546 Topics In Stratigraphy (3).** Discussion of research projects and/or current literature in stratigraphic correlation as derived from sedimentologic principles and biostratigraphy. Prerequisite: GLY 5346.

**GLY 5608 Advanced Paleontology I (3).** Discussion of current literature and research projects on evolution, sys-

tematics functional morphology, with reports by members of the seminar. Prerequisites: GLY 4650, GLY 5609, or permission of instructor.

**GLY 5621 Caribbean Stratigraphic Micropaleontology (3).** Survey of the stratigraphy of biostratigraphic type-sections described in the Caribbean area. Deep-sea stratigraphy from both piston-cores and Deep-Sea Drilling Project samples. Emphasis is placed on planktonic foraminifera and radiolaria species used as index-species in the equatorial-tropical biozonation typified in Cretaceous and Cenozoic Caribbean sediments. Paleobiogeographic and paleoecologic considerations. Considerable time will be devoted to the study and identification of specimens under the microscope. Prerequisite: GLY 4650 or permission of instructor.

**GLY 5785 Caribbean Shallow-Marine Environments (3).** Four-week field study of multiple tropical environments as illustrated in the Caribbean. Physico-chemical processes in nearshore arenaceous, argillaceous and calcareous environments. Coral reef morphology, ecology and distribution patterns. Dynamical processes acting on nearshore environments, and their effects on reef growth and distribution. Reef bioerosion. Coastal evolution in response to natural processes. On-site study of some similar emerged environments in the Caribbean islands. Economic importance of tropical shallow-marine environments in world fuel resources. Course includes extensive field work both on land and underwater, and an individual field research project. Qualifications: Open to advanced undergraduate and graduate students in the earth and biological sciences or cognate fields.

**GLY 5816 Economic Geology (3).** Economically important metal deposits of sedimentary, igneous and hydrothermal origins and their geologic settings and characteristics. Prerequisites: GLY 1010, GLY 3200, CHM 1045, CHM 1046.

**GLY 5826 Hydrogeologic Modeling (3).** Introduction to the techniques used in modeling groundwater flow and solute transport in geologic systems and their application in regional studies. Prerequisites: GLY 5827, MAP 3302, or permission of instructor.

**GLY 5827 Hydrogeology (3).** Recharge and discharge of groundwater, geologic controls on groundwater occurrence, movement and water chemistry. Prerequisite:

Physical Geology, Chemistry, or permission of instructor.

**GLY 5931 Graduate Seminar (1).** Presentation or critical examination of current research problems in geology. A selection of topics is considered each term. Topics may also include individual research in the student's field of investigation. Prerequisite: Graduate standing or permission of instructor.

**GLY 6159 Stratigraphy of the Circum Caribbean Region (4).** Detailed lithostratigraphic and biostratigraphic analyses of Caribbean islands, Central America, northern South America and Caribbean basin. Prerequisite: GLY 5621 or permission of instructor.

**GLY 6247 Trace Element and Isotope Geochemistry (3).** Principles of trace element and isotope fractionation and radioactive decay, and their application to the interpretation of igneous rocks and the chemical evolution of the earth. Prerequisite: GLY 5246 or permission of instructor. Corequisite: GLY 6247L.

**GLY 6247L Trace Element and Isotope Geochemistry Lab (1).** Analysis of trace elements in rocks and minerals; use of trace element and isotopic data in solving geologic problems. Prerequisite: GLY 5246 or permission of instructor.

**GLY 6328 Advanced Igneous Petrology (3).** Interpretation of igneous rocks; chemistry and physics of magma generation and crystallization; origin of major igneous rock series with emphasis on tectonic controls. Prerequisite: Permission of instructor. Corequisite: GLY 6328L.

**GLY 6328L Advanced Igneous Petrology Lab (1).** Identification of rocks using microscopic and microprobe techniques. Prerequisite: Permission of instructor. Corequisite: GLY 6328.

**GLY 6392 Topics In Igneous Petrology and Geochemistry (3).** Research seminar in contemporary petrology and geochemistry. Student presentation on thesis research. Prerequisite: GLY 5322 or permission of instructor.

**GLY 6417 Caribbean Structural Geology and Tectonics (4).** Students will be assigned areas and/or topics to make presentation of. These will be introduced and supplemented by lecture material. Prerequisite: GLY 5408

**GLY 6447 Advanced Topics In Structural Geology and Tectonics (3).** Detailed exploration of selected research topics in structural geology and

tectonics. Prerequisites: GLY 5446 or permission of instructor.

**GLY 6468 Paleomagnetism (3).** Physics of rock and mineral magnetism, geomagnetism and paleomagnetism; field and laboratory methods, geomagnetic field behavior, magnetostratigraphy, apparent polar wander. Prerequisite: GLY 4400, GLY 3200 or permission of instructor. Corequisite: GLY 6468L.

**GLY 6468L Paleomagnetism Laboratory (1).** Physics of rock and minerals magnetism, geomagnetism and paleomagnetism; field and laboratory methods, geomagnetic field behavior, magnetostratigraphy, apparent polar wander. Prerequisite: GLY 4400, GLY 3200 or permission of instructor. Corequisite: GLY 6468

**GLY 6485 Physics of the Earth (3).** Properties and dynamics of the Earth's interior studied from a physical perspective. Topics include heat flow, fluid flow, earthquake seismology. Prerequisites: GLY 4450 and MAC 3313.

**GLY 6496 Advanced Topics in Geophysics (3).** Discussion of research projects and current literature in geophysics. Prerequisite: GLY 5495.

**GLY 6595 Topics in Sedimentology (3).** Oral presentation by students of research projects and survey of relevant literature with reports by members of the seminar. Prerequisite: GLY 5546.

**GLY 6626 Stratigraphic Micropaleontology: Foraminifera (3).** Nomenclature, taxonomy, and biostratigraphy of Cretaceous and Cenozoic planktonic foraminifera. Studies of stratigraphically important taxa from Caribbean land sections, piston cores, and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor.

**GLY 6627 Stratigraphic Micropaleontology: Radiolaria (3).** Nomenclature, taxonomy and biostratigraphy of Cretaceous and Cenozoic radiolaria. Studies of stratigraphically important taxa using Caribbean land sections, piston cores, and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor.

**GLY 6628 Stratigraphic Micropaleontology: Calcareous Nannofossils (3).** Nomenclature, taxonomy, and biostratigraphy of Triassic to Recent nannofossils. Intensive training of identification of marker taxa using land and DSDP/ODP sites. Prerequisites: GLY 5621 or permission of instructor.

**GLY 6690 Topics in Paleontology (3).** Oral presentation and discussion of current research projects and relevant literature, with reports by members of the seminar. Prerequisite: GLY 5608 or permission of instructor.

**GLY 6931 Advanced Graduate Seminar (1).** Oral presentation and discussion by students of an assigned literature survey, with reports by members of the seminar. Prerequisite: GLY 5931 or permission of the instructor.

**GLY 6966 Master's Comprehensive Examination (0).** Oral and written examinations on knowledge in general geology and the student's field of concentration. Schedule to be selected in consultation with the Graduate Committee. Prerequisite: Advanced graduate standing.

**GLY 6971 Master's Thesis (1-12).** Field and/or laboratory research project toward thesis. Selected in consultation with major professor. Prerequisite: Permission of major professor.

**OCG 6105 Advanced Marine Geology (3).**

**OCG 6105L Advanced Marine Geology Lab (1).** Application of geophysical and geological data to the interpretation of the earth's crust under the oceans, including the data provided by the Deep-Sea Drilling Project, dredging, piston coring, gravity magnetism, and seismicity. Special emphasis will be given to the genesis and evolution of the Atlantic and Caribbean margins, and their potential for oil resources. Prerequisite: GLY 4730 or permission of instructor.

**OCG 6280 Marine Sedimentary Petrology (3).**

**OCG 6280L Marine Sedimentary Petrology Lab (1).** Analysis of the genesis, distribution pattern, physical and chemical properties of marine sedimentary facies, with emphasis on deep-sea sediments. Topics include deep-sea diagenetic and lithification processes, their geochemical relationship in time and space. Prerequisite: GLY 4555 or permission of instructor.

**OCG 6664 Paleocceanography (3).** Mesozoic/Cenozoic development of the major ocean basins, their circulation and sedimentation history. Use of micropaleontologic and stable isotopic techniques in paleoceanographic analysis. Prerequisite: GLY 4730 or permission of instructor.

## History

**Mark D. Szuchman, Professor and Chairperson**

**Daniel A. Cohen, Assistant Professor**  
**John D. French, Assistant Professor**  
**Gilbert Joseph, Professor**  
**Howard Kaminsky, Professor Emeritus**  
**Eric J. Leed, Associate Professor**  
**Alex Lichtenstein, Assistant Professor**  
**Felice Lifshitz, Assistant Professor**  
**Joseph F. Patrouch, Assistant Professor**  
**Brian Peterson, Associate Professor**  
**Joyce S. Peterson, Associate Professor**  
**Gerald Poyo, Assistant Professor**  
**Darden Asbury Pylon, Professor**  
**Howard B. Rock, Professor**  
**Warren T. Treadgold, Professor**

## Master of Arts in History

The Department of History offers the M.A. degree, with concentration in one of three culture areas: United States, Europe, and Latin America. Students will choose to follow either a thesis or a report track, in consultation with the Department's Graduate Advisor. Students must make their selection either prior to registering for their first Research Seminar or before completing the first twelve (12) semester-hours toward the degree, whichever comes first. The degree requirements for the M.A. vary somewhat, according to the option taken.

### Entrance Requirements

Requirements for admission into the M.A. degree program in History are the same regardless of the option selected. Applicants must also satisfy any additional requirements the University sets for admission to graduate work. Applications should include transcripts from any postsecondary institutions attended, GRE scores, and two (2) letters of recommendation.

Applicants seeking entrance for the Fall Term should prepare all application materials in time for the Department of History to receive them no later than February 15. Applicants will be notified of the Department's decision regarding their application no later than March 15.

Application materials from individuals seeking entrance for the Spring Term must be received by the Department of History no later than October 15. Applicants will be notified of the Department's decision no later than November 15.

1. Applicants to the M.A. degree program in History must have an under-

graduate average of 3.0 (on a 4.0 scale) or score 1000 or better in the Graduate Record Examination. The GRE must be taken within three years prior to the application.

2. Two letters of recommendation. Applicants should ensure that each letter on their behalf is signed by the author along the sealed flap of the envelope. Letters should be mailed directly to the Graduate Advisor, Department of History.

3. Applicants must have completed 12 semester-hours of credit (on the basis of 3-hour courses) in the undergraduate courses in History.

Any applicant with fewer than twelve (12) semester-hours of undergraduate courses in History may be accepted provisionally and take a maximum of nine (9) semester-hour credits by registering for courses under the category of Special Student (consult the University Catalog and the Office of Admissions). After completing nine semester-hours of undergraduate course work in History with no grade lower than a 'B' (3.0), the student may apply for regular admission. The application will be reviewed by the Department's Graduate Advisor, in consultation with the Department's faculty.

## Degree Requirements

### Thesis Option

1. A minimum of 30 semester-hours for the degree, including a maximum of six semester-hours of Thesis Research. All coursework must be taken at FIU.

2. A minimum of 24 semester-hours of coursework.

3. A minimum of one Research Seminar (3 semester-hours).

4. Reading competence in a foreign language. Language competency is assessed by the Department's faculty, as appropriate. Courses required to meet the language competency requirement do not count toward the degree. The Latin American concentration requires proficiency in Spanish or Portuguese; the European concentration in Spanish, French or German; the United States concentration in any of the above.

5. The following limits are placed in accumulating credits toward the M.A. degree:

- a. No more than three semester-hours of HIS 5908 (Independent Study).
- b. Students must receive the grade of 'B' (3.0) or better for any course to count toward the degree.
- c. A maximum of six semester-hours of HIS 5930 (Special Topics).
- 6. All students are required to take HIS 6128 (Historical Methods).

7. Core Area. Students will select one core area for concentration in United States History, European History, or Latin American History, in consultation with the Graduate Advisor. Twelve semester-hours of course work will be taken within the core area.

8. Breadth Areas. Students will take six semester-hours in breadth areas. These may be courses taken within the Department of History that are outside the culture area of concentration, or in associated disciplines outside of the Department (with the approval of the Graduate Advisor), or a combination of the two.

9. Students will register for up to six semester-hours of HIS 6970 (Thesis Research).

10. The thesis must be successfully defended and formally approved by a Supervisory Committee composed of three members of the Department of History. The Supervisory Committee is convened and headed by the thesis supervisor. In cases of cross-disciplinary research, an external reader from a different department may form part of the Supervisory Committee, substituting for one member from the Department of History.

11. The degree candidate will prepare the thesis in accordance to the regulations stipulated in the University's Graduate Policies Manual. The degree will be conferred after the approval of the final version of the thesis by the Office of the Dean of the College of Arts and Sciences.

### Report Option

1. A total of 30 semester-hours of course work are needed for the M.A. degree. The report option does not set requirements of the Core/Breadth area distribution. Students will design their distribution needs in consultation with the Graduate Advisor and the relevant faculty. All courses must be taken in the Department of History.

2. A minimum of two Research Seminars (6 semester-hours) must be taken. If approved by the faculty, the papers written for the seminars will be presented to the Graduate Advisor for approval.

3. The following limits are placed on accumulating credits towards the Master's degree:

- a. Students must receive the grade of 'B' (3.0) or better for the course to count toward the degree.
- b. HIS 5908 (Independent Study) is limited to three semester-hours.
- c. HIS 5930 (Special Topics) is limited to six semester hours.
- 4. HIS 6128 (Historical Methods) is required of all students.

## Core Courses

The following courses count as Research Seminars for both the Thesis and the Report options:

AMH 5905	Readings in American History
AMH 5915	Research in American History
AMH 5935	Topics in American History
EUH 5905	Readings in European History
EUH 5915	Research in European History
EUH 5935	Topics in European History
LAH 5905	Readings in Latin American History
LAH 5915	Research in Latin American History
LAH 5935	Topics in Latin American History
HIS 5289	Comparative History
HIS 5930	Special Topics
HIS 5908	Independent Study
HIS 5910	Advanced Research Seminar

Consultation with the Graduate Advisor is required before registering for the following courses:

HIS 6128	Historical Methods
HIS 6970	Thesis Research
HIS 6971	Master's Thesis

## Course Descriptions

### Definition of Prefixes

AMH-American History; EUH- European History; HIS-General; LAH-Latin American History; WO-World History.

**AMH 5905 Readings in American History (3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in American history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**AMH 5915 Research in American History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in American History. Subjects will vary according to professor. Prerequisite: Graduate standing.

**AMH 5935 Topics in American History (3).** An examination of specific themes or topics in American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme

will be announced in the yearly schedules.) Prerequisite: Graduate standing.

**EUH 5905 Readings in European History (3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in European history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**EUH 5915 Research in European History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in European History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**EUH 5935 Topics in European History (3).** An examination of specific themes or topics in European history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

**HIS 5289 Comparative History (3).** A study of specific topics in history that cut across regional, national, and chronological lines. The topics will change from semester to semester, and with a change in content, the course may be repeated. (The topic of the course will be announced in the yearly schedule.)

**HIS 5908 Independent Study (VAR).** Individual conferences, assigned readings and reports on independent investigations, with the consent of the instructor.

**HIS 5910 Advanced Research Seminar (3).** Small group sessions will analyze particular subject areas in history, with the consent of the instructor.

**HIS 5930 Special Topics (3).** An examination of specific themes or topics in history. The theme will vary from semester to semester, and with a change in content, the course may be repeated. (The theme will be announced in the yearly schedule.) Prerequisite: Graduate Standing.

**HIS 5940 Supervised Teaching (3).** The students will work under the close supervision of a regular member of the faculty in a mentorship fashion. The supervision will cover various aspects of course design and delivery in History.

**HIS 6128 Historical Methods (3).** A seminar designed to introduce the beginning graduate student to the technical aspects of the study of history. This course treats the problems involved in the preparation of the Master's thesis.

**HIS 6970 Thesis Research (1-10).** Research toward completion of Master's Thesis. May be repeated. Prerequisite: Permission of Department.

**HIS 6971 Master's Thesis (3).** The course is for students preparing their theses. Prerequisite: Successful completion of all graduate requirements and electives.

**LAH 5905 Readings in Latin American History (3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in Latin American history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**LAH 5915 Research in Latin American History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in Latin American History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**LAH 5935 Topics in Latin American History (3).** An examination of specific themes or topics in Latin American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

## International Relations

**Ralph S. Clem, Professor and Chairperson**

**Ken I. Boodhoo, Associate Professor**  
**Thomas A. Breslin, Associate Professor**

**John F. Clerk, Assistant Professor**  
**Peter R. Craumer, Assistant Professor**  
**Damian J. Fernandez, Associate Professor**

**Dean L. Hansen, Assistant Professor**  
**Farrokh Jhabvala, Professor**  
**Antonio Jorge, Professor**  
**Charles G. MacDonald, Professor**  
**Mohiaddin Mesbahi, Assistant Professor**

**Susan E. Waltz, Associate Professor**  
**Gregory B. Wolfe, Professor**

The Department of International Relations does not presently offer a degree program at the graduate level but does however offer graduate courses. These courses are offered to supplement other graduate degree programs at the University.

## Course Descriptions

### Definition of Prefixes

GEA-Geography-Regional (Area); GEO-Geography-Systemic; INR-International Relations; PUP-Public Policy.

**GEO 5415 Topics in Social Geography (PG, IP) (3).** Topics discussed include geographic aspects of population and ethnicity, with emphasis on sources and analysis of data and pertinent concepts. Prerequisite: GEA 3000 or permission of instructor.

**INR 5087 Ethnicity and the Politics of Development (3).** This course examines the conceptual and substantive dimensions of ethnicity in the context of world politics and political development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics.

**INR 5607 International Relations and Development (3).** An analysis and conceptualization of the process of development as it takes place in the international context. Special attention given to the role of international organizations in promoting development and the manner in which differences in developmental levels conditions international relations.

**INR 5906 Independent Study (VAR).** Directed independent research. Requires prior approval by instructor.



**INR 5935 Topics in International Relations (3).** Varies according to the instructor.

**INR 6008 Colloquium in International Studies (3).** A systemic and International Relations topic supplemented with a consideration of legal, institutional and developmental issues. Prerequisite for MIB students: INR 6603 (World Politics).

**INR 6605 Contemporary International System (3).** Study of synthetic review of theories of development and approaches to the study of development as a process of social, political, and economic change. Prerequisites: CPO 5035 and ESC 5025.

**INR 6975 Thesis (1-6).** Registration for students working on their thesis. Prerequisites: All other coursework for the Master's in International Studies.

## International Studies

**Damian Fernandez, Director,**  
*International Studies*

**Participating Departments:**

**Raul Moncarz, Chairperson Economics**

**Mark Szuchman, Chairperson, History**

**Ralph Clem, Chairperson,**

*International Relations*

**Joel Gottlieb, Chairperson, Political Science**

**Guillermo Grenier, Sociology/Anthropology**

## Master of Arts in International Studies

The Master's program in International Studies is an interdisciplinary program designed to prepare students for careers in government, the private sector, or international agencies. The program focuses on the broad issue of socio-economic development. Students may specialize in the area of international relations and development, social change and development, development economics, or Latin America and Caribbean studies. The interdisciplinary character of the program ensures that the subject matter is treated as a whole. Scholarships and assistantships are available.

### Admission Requirements

A 3.0 GPA in upper-level work from an accredited institution and a combined

score of 1000 on the Graduate Record Examination. Foreign applicants must be eligible for further study in their own country and must demonstrate proficiency in the English language.

### Degree Requirements

The Master of Arts in International Studies requires a minimum of 36 semester hours of course work at the graduate level. Students may also have to satisfy prerequisites at the undergraduate level for some courses in the program. Such courses will not be counted toward the 36 hour minimum requirement. (A maximum of six semester hours of graduate coursework may be transferred from other institutions of higher education subject to the approval of the Interdepartmental Advisory Committee).

#### Core Courses: (15)

CPO 5035	Politics of Development	3
ECS 5025	Economic Problems of Emerging Nations	3
INR 5607	International Relations and Development	3
POS 5706	Research Methodology	3
SYP 5447	Sociology of International Development	3
Electives		15

A minimum of five graduate level courses chosen from the departments of Economics, History, International Relations, Political Science, and Sociology/Anthropology. Elective courses may also be taken in other fields with the approval of the Director.

#### Thesis (6)

The thesis requirement will normally be undertaken after completion of a major portion of the coursework and the approval of a thesis proposal. The thesis must demonstrate an ability to organize existing knowledge, synthesizing the available information from more than one discipline, and focusing that knowledge to illuminate a problem, policy, or theory in International Studies.

#### Language Requirement

Prior to graduation, all students must demonstrate competency in the use of a modern foreign language. Language courses cannot count for credit in the program.

## Linguistics

**Asher Z. Milbauer, Associate Professor and Chairperson, English**

**C. Kemp Williams, Assistant Professor and Director, English**

**Lynn M. Berk, Associate Professor, English**

**Isabel Castellanos, Associate Professor, Modern Languages**

**Virginia Gathercole, Associate Professor, English**

**Tomer Hopkins, Instructor, English**

**John B. Jensen, Associate Professor, Modern Languages**

**Peter A. Machonis, Associate Professor, Modern Languages**

**Mehmet Yavas, Associate Professor, English**

## Master of Arts in Linguistics

### Admission Requirements

Applicants must meet the University's graduate general admissions requirements; a GRE score of 1000 on the verbal and quantitative sections or an undergraduate GPA of 3.0 will be required. In addition, non-native speakers of English must submit a TOEFL score of 600.

### Degree Requirements

The Master of Arts in Linguistics requires 36 graduate hours in Linguistics, distributed as follows:

#### Required Courses: (21)

LIN 5018	Introduction to Linguistics	3
LIN 5501	English Syntax	3
LIN 5206	Phonetics	3
LIN 6323	General Phonology (Prerequisite: LIN 5206)	3
LIN 6510	Generative Syntax I	3
LIN 6805	Semantics (Prerequisite: LIN 6510)	3
LIN 5146	Historical and Comparative Linguistics (Prerequisite: LIN 5206)	3
LIN 5107	History of the English Language	or
FRE 5845	History of the French Language	or
SPN 5845	History of the Spanish Language	

The remaining hours must be selected from any graduate Linguistics

offerings, including courses in the following areas:

Acoustic Phonetics  
General Morphology and Syntax  
Dialectology  
Sociolinguistics  
Psychology of Language  
Language Acquisition  
Second Language Acquisition  
Language Contact  
Studies in Bilingualism  
Applied Linguistics  
Language Universals  
Cognitive Linguistics  
Speech Errors and Linguistic Knowledge  
Research Methods in Linguistics  
Structure of a Non-Indo-European Language  
Special Topics in Linguistics  
Seminar (various topics)  
Thesis (maximum of six hours)

Linguistic courses are taught in the Departments of English and Modern Languages. See those sections for specific course descriptions.

### Foreign Language Requirement

Each student will be required to take a minimum of five semester hours of formal study of a foreign language not already known by the student or of Middle or Old English. The language to be studied will be decided on in consultation with the student's advisor.

### Examination Requirement

Students will be required to take a written comprehensive exam in Linguistics.

### Thesis/Non-Thesis Options

Students may elect to follow a thesis or a non-thesis option. Those electing to write a thesis will take up to six credit hours in thesis research as part of their required 36 hours. When completed, the thesis will be defended orally before a committee made up of three faculty members, including the thesis director. Those electing to follow the non-thesis option will take all 36 hours in non-thesis courses.

## Course Descriptions

### Definition of Prefixes

LIN - Linguistics.

**LIN 5017 Cognitive Linguistics (3).** Explores the nature of human reason and categorization as revealed by language. Examines the role of metaphor, imagination, and bodily experience in human thought processes. Prerequisites: LIN 3013, or LIN 3010, or the equivalent, or permission of instructor.

**LIN 5018 Introduction to Linguistics (3).** Introduction to linguistic theory and analysis, with special emphasis on the major components of languages and modern approaches to their analysis.

**LIN 5107 History of the English Language (3).** Study of the development of the grammar and vocabulary represented in samples of the English language from the 8th century to modern times. Prerequisite: LIN 3013 or permission of instructor.

**LIN 5108 Language Universals (3).** Universal properties of language from two major perspectives: those of Typologists and of Universal Grammarians. A variety of linguistic structures and theoretical explanations are examined. Prerequisite: LIN 3013, or LIN 3010, or LIN 5018, or the equivalent.

**LIN 5146 Historical and Comparative Linguistics (3).** The study of linguistic methodology for determining historical and genetic relationships among languages. Diachronic syntax and its methodology will be included. The relevance of historical comparative linguistics to similar processes found in language acquisition and to sociolinguistics will be studied. Prerequisite: LIN 5206.

**LIN 5206 Phonetics (3).** The study of the articulatory mechanisms used in producing speech sounds and of their acoustic properties. Ear training in the phonetic transcription of speech sounds used in the world's languages.

**LIN 5431 General Morphology and Syntax (3).** The study of linguistic methodology for determining the morphological and syntactic structures of languages. Distinct theoretical approaches to analysis will be emphasized. The student will study recent developments in linguistics that bear on language-universal and language-specific aspects of morphology and syntax. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 5501 English Syntax (3).** This course will focus on syntactic analysis of English. Although the course itself is non-theoretical, it uses a variety of underlying theoretical approaches to train students in syntactic analysis.

**LIN 5715 Language Acquisition (3).** The study of the processes underlying normal first-language acquisition. The focus is on the development of the sub-systems of language (i.e., the phonological, morphological, syntactic,

and semantic subsystems) in the child's growing command of his native language.

**LIN 5732 Speech Errors and Linguistic Knowledge (3).** This course focuses on the nature of linguistic errors produced by speakers in their native languages. Students will read research on errors produced by adult native speakers of a language, on first-language errors of children, and on errors made by persons acquiring a second language. Prerequisite: LIN 3013 or LIN 3010.

**LIN 5748 Applied Linguistics: Theory and Applications (3).** Theoretical and practical approaches to second-language acquisition. Examination of and hands-on experience with early and recent approaches (Contrastive Analysis, Error Analysis, Parameter Setting, etc.)

**LIN 6323 General Phonology (3).** The study of phonological process in languages and linguistic methodology for phonological analysis. Emphasis will be placed on recent theoretical questions concerning such issues as the abstractness of underlying forms, the naturalness of processes, and the relevance of markedness to a phonological description. Prerequisite: LIN 5206, Phonetics.

**LIN 6510 Generative Syntax I(3).** This course will expose students to the theoretical models on which much contemporary work in English grammar is based. Students will read works on selected topics such as structural linguistics, transformational grammar, and case grammar. Specific content may change from semester to semester. May be retaken for credit when content changes. Prerequisite: LIN 5501, English Syntax.

**LIN 6572 Structure of a Non-Indo-European Language (3).** An in-depth study of the structure of a non-Indo-European language. The particular language to be studied will be varied from semester to semester. Course may be repeated. Prerequisites: LIN 5013, LIN 5206, LIN 5222, and a course in syntax.

**LIN 6602 Language Contact (3).** A study of the language changes that occur when two or more languages come into contact with one another. The course will also examine the characteristics of the individuals and communities involved in such contact.

**LIN 6805 Semantics (3).** The study of linguistic semantic language-universal and language-specific properties of the

semantic structure of words in sentences will be considered. Recent debate and theoretical aspects, including those touching on the nature of word meaning, presuppositional-assertional grammar, and Speech-Act theory, will be read and discussed. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 6905 Independent Study (VAR).** This course is designed for students who wish to pursue specialized topics in advanced Linguistics: phonetics, phonology, morphology, syntax, semantics, psycholinguistics, historical linguistics, or language contact. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 6937 Seminar in Linguistics (3).** Topics vary each semester. Prerequisite: A previous course in the same sub-area of Linguistics.

**LIN 6971 Thesis (1-6).** Prerequisite: Completion of all other requirements for the M.A. degree in Linguistics.

## Mathematics

**Dev K. Roy, Associate Professor and Chairperson**

**Gerardo Aladro, Associate Professor**

**William Calbeck, Assistant Professor**

**Mark L. Copper, Assistant Professor**

**Domitilla Fox, Instructor**

**Susan Gorman, Instructor**

**Peter Holden, Assistant Professor**

**Steven M. Hudson, Assistant Professor**

**George Kafkoulis, Assistant Professor**

**Mark Leckband, Associate Professor**

**Diana McCoy, Instructor**

**Abdelhamid Meziani, Assistant Professor**

**Richard Nadel, Instructor**

**J. Michael Pearson, Assistant Professor**

**Anne Pilkington, Assistant Professor**

**Taje Ramsamujh, Associate Professor**

**David Ritter, Associate Professor**

**Michael Rosenthal, Instructor**

**Richard L. Rubin, Associate Professor**

**Philippe Rukimbira, Assistant Professor**

**Anthony C. Shershin, Associate Professor**

**Minna Shore, Instructor**

**James F. Sliker, Associate Professor**

**W. Jay Sweet, Assistant Professor**

**Enrique Villamor, Assistant Professor**

**Willie E. Williams, Associate Professor**

**John Zweibel, Associate Professor**

## Master of Science in Mathematical Sciences

### Admission

The following are in addition to the University's graduate admission requirements:

1. Bachelor's degree in mathematics, applied mathematics or mathematical sciences from an accredited university or college.

2. A 'B' average or higher in upper division mathematics courses.

3. Graduate Record Examination taken within the past five years, with at least 650 on the quantitative portion and 500 on each of the other two parts.

4. Three letters of recommendation concerning the candidate's achievement and potential, from persons familiar with the candidate's previous academic performance.

5. Approval of the Graduate Committee.

### Core Courses

The student must choose three courses from each of the following lists:

#### List A:

MAA 5616	Introduction to Real Analysis	3
MAP 5236	Mathematical Techniques of Operations Research	3
MAS 5215	Number Theory	3
STA 5446	Probability Theory	3
STA 6807	Queueing and Statistical Models	3

#### List B:

MAD 5405	Numerical Methods	3
MAP 5407	Methods of Applied Analysis	3
MAS 5145	Applied Linear Algebra	3
COT 5420	Theory of Computation I	3
COT 6400	Analysis of Algorithms	3

#### Electives: (6)

The student must choose six hours of graduate level coursework in computer science, economics, engineering, mathematics, physics or statistics, with the prior approval of the Mathematics Graduate Committee.

### Master's Project

The student will prepare an expository paper under the direction of a faculty member, who will assign the grade. Successful completion of the master's project requires a grade of 'B' or higher, as well as approval of a committee consisting of three mathematics faculty (including the director).

**Remarks:** The coursework must be completed with a 'B' average or higher and a grade of 'C' or higher in each course. A maximum of two courses may be transferred into the program from outside the University, subject to the approval of the Graduate Committee.

### Course Descriptions

#### Definition of Prefixes

MAA-Mathematics, Analysis; MAD-Mathematics, Discrete; MAP-Mathematics, Applied.

#### COT 5420 Theory of Computation I

(3). Abstract models of computation; halting problem; decidability and undecidability; recursive function theory. Prerequisite: MAD 3512.

#### COT 6400 Analysis of Algorithms

(3). Complexity behavior of algorithms is described for Set Manipulation, Graph Theory, and Matrix Manipulation problems, among others. P and NP classes of problems reveal an inherent difficulty in designing efficient algorithms. Prerequisite: COP 3530.

**MAA 5616 Introduction to Real Analysis (3).** Lebesgue Measure and Integral with applications to Integral Transforms. Prerequisite: MAS 3105, MAA 4211, MAP 4401 or MAA 4212.

**MAD 5405 Numerical Methods (3).** Advanced ideas and techniques of numerical analysis for digital computation. Topics include: linear and non-linear systems, ordinary differential equations, continuous system modeling techniques, and languages. Prerequisites: MAS 3105 and MAP 3302.

**MAP 5236 Mathematical Techniques of Operations Research (3).** This course surveys the mathematical methods used in operations research. Topics will be chosen from linear programming, dynamic programming, integer programming, network analysis, classical optimization techniques, and applications such as inventory theory. Prerequisite: MAP 5117 and MAS 3105 and either CGS 3420 or COP 2210.

**MAP 5407 Methods of Applied Analysis (3).** Convergence, fixed point theorems, application to finding roots of equations, normed function spaces, linear operators, applications to numerical integration, differential and integral equations. Prerequisites: MAA 4211, MAP 3302, and MAS 3105.

**MAS 5145 Applied Linear Algebra (3).** Concepts of finite dimensional vector spaces. Theorems that have infinite

dimensional analogues and those with important applications are emphasized. Prerequisites: MAS 3105 and MAA 3200.

**MAS 5215 Number Theory (3).** Topics to be discussed are selected from the following: congruences, Diophantine equations, distribution of primes, primitive roots, quadratic reciprocity, and classical theorems of number theory. Prerequisites: MAS 3312 or permission of Instructor.

**MAT 5907 Independent Study (VAR).** Individual conferences, assigned reading, and reports on independent investigations.

**STA 5446-STA 5447 Probability Theory I and II (3-3).** This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory, covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems, and law of iterated logarithm. Prerequisite: MAC 3313.

**STA 6807 Queuing and Statistical Models (3).** Review of probability concepts, basic probability distributions, Poisson process, queuing models, statistical models. Prerequisites: Permission of Instructor, MAC 3312 and either STA 3033 or STA 3321.

## Modern Languages

**Reinaldo Sanchez, Professor and Chairperson**

**Irmenia Aragon, Instructor, (North Miami Campus)**

**Aurelio Baldor, Instructor**

**Isabel Castellanos, Associate Professor**

**Rodolfo Cortina, Professor**

**James O. Crosby, Professor**

**Leonel A. de la Cuesta, Associate Professor**

**Lucia Helena, Visiting Associate Professor**

**Danielle Johnson-Cousin, Associate Professor**

**Elena de Jongh, Assistant Professor**

**Yvonne Guers-Villate, Professor Emeritus**

**John B. Jensen, Associate Professor**

**Peter A. Machonis, Associate Professor**

**Ramon Mendoza, Professor (North Miami Campus)**

**Marian Montero-Demos, Assistant Professor**

**John Moore, Assistant Professor**

**Ana Roca, Assistant Professor**

**Andree Stayman, Instructor**

**Marcelle Welch, Associate Professor**

**Florence Yudin, Professor**

**Maida Watson Espener, Associate Professor**

## Master of Arts in Hispanic Studies

To be admitted into the Master's degree program, a student must:

1. Hold a Bachelor's degree in Modern Languages, Linguistics or one of the Social Sciences as related to the Hispanic world from an accredited university or college, or its equivalent;

2. Have a 3.0 GPA or higher during the last two years of the student's undergraduate program and a combined score (quantitative and verbal) of 1,000 or higher on the GRE. Students who have not taken the GRE may enroll in graduate courses in the cooperating departments; however, admission to the graduate program is conditional upon taking and receiving a score of 1,000 on the GRE within six months of the beginning of study;

3. Have the ability to speak both Spanish and English with near-native fluency;

4. Submit two letters of recommendation, preferably from persons in the academic community who are in a position to comment on the applicant's suitability for graduate work;

5. Receive approval of the departmental graduate committee. Students with deficiencies will be advised to complete certain course work before beginning graduate work.

## Degree Requirements

The Master's degree program consists of 33 semester hours of graduate level work. A maximum of six credits of graduate course work may be transferred into the program from other institutions, subject to the approval of the departmental graduate committee. Six core courses and three elective courses are required at the 5000- and 6000-level.

## Core Courses

LIN 6934	Special Topics in Linguistics	3
FOT 5805	Translation and Interpretation Arts	3
SPN 6505	Spanish Culture	3
SPN 5525	Spanish American Culture	3
SPN 6535	The Hispanic Presence in the United States	3

One course at the graduate level on Latin American sociology, anthropology, political science, or history, to be taken outside of the department.

The following are examples of courses that will satisfy this requirement. Each semester the department prepares a list of appropriate courses from among the offerings of the cooperating departments, which should be consulted prior to registration.

CPO 5036	The Politics of Development	3
HIS 5910	Research Seminar	3
ECS 5005	Comparative Economic Systems	3
ECS 5025	Economic Problems of Emerging Nations	3
ECS 7405	Economics of Latin America	3
CYP 6055	Theories and Research in Acculturation and Multiculturalism	3
CYP 6766	Psychology of Crosscultural Sensitization in a Multicultural Context	3
DEP 6145	Culture and Childhood	3
DEP 6465	Culture and Aging	3
SOC 5338	Sociology of International Development	3

## Electives

A student must take at least nine graduate credits of electives from courses offered by the department, such as French or Spanish linguistics, literature and translation/interpretation, or from

those offered by the departments of History, Political Sciences, Sociology/Anthropology, Economics, and Psychology.

### Third Language

Students will be required to speak either French, Portuguese, or Haitian Creole at a level of general communication. Students who do not meet this requirement upon admission must begin their study of the third language in their first semester of study.

### Graduation Requirements

To receive the Master's degree in Hispanic Studies, students must complete all the course work with a 3.0 GPA or higher, and must receive at least a 'B' in each of the core courses. After having completed 27 graduate credits (core and elective courses), students will have the option of writing a thesis (equivalent to six credits) or taking two courses or more and submitting a research paper. The thesis will be presented to an ad hoc committee chosen by the student and his or her advisor.

## Course Descriptions

### Definition of Prefixes

FOL- Foreign Languages; FOT- Foreign Languages in Translation; FOW- Foreign Languages, Comparative Literature; FRE- French Language; FRT- French Translation; FRW- French Literature (Writings); GER- German Language; LIN- Linguistics; POR- Portuguese Language; SPN- Spanish Language; SPT- Spanish Translation; SPW- Spanish Literature (Writings).

(See English listing for additional Linguistics courses.) Application of basic language skills.

### FOL 5735 Romance Linguistics (3).

The common and distinctive Romance features. Survey of linguistic geography and internal/external influences.

### FOL 5806 Independent Study (1-3).

Project, field experience, readings, or research.

### FOT 5125 Literature in Translation

(3). Masterpieces of world literature. Open to students who are proficient in more than one language.

### FOT 5805 Translation/Interpretation Arts (3).

The language barrier and translation and interpretation. Types, modes, and quality of T/I: philological, linguistic, and socio-linguistic theories. History of T/I from Rome to date. The impact of T/I on Inter-American develop-

ments. Prerequisite: Graduate standing or permission of instructor.

**FWW 5395 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FWW 5545 Bicultural Writings (3).** Experiment in linguistic pluralism. Content and focus to be determined by the international community.

**FWW 5587 Comparative Studies (3).** Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

**FWW 5934 Special Topics in Language/Literature (3).** Content and objectives to be determined by students and teacher.

**FWW 5938 Graduate Seminar (3).** Topic and approach to be determined by students and instructor. (Approval of the Department required.)

**FRE 5060 Language for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. and Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**FRE 5061 Language for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: FRE 5060 or equivalent.

**FRE 5735 Special Topics in Linguistics (3).** Content to be determined by students and instructor. (Approval of Department required.)

**FRE 5755 Old French Language (3).** Introduction to the phonology, morphology, and syntax of the Old French language. Reading and analysis of the 12th and 13th century texts in their original. Comparison of major medieval dialects. Prerequisite: FRE 4840 or FRE 5845.

**FRE 5845 History of the Language (3).** The internal and external history of language development. Examination of model texts from key periods of evolution. Prerequisite: FRE 3780 or LIN 3010 or LIN 3013.

**FRE 5908 Independent Study (1-3).** Project, field experience, readings, or research.

**FRT 5805 Translation/Interpretation Arts (3).** Techniques of professional translation and interpretation. Prerequisite: FRT 4801.

**FRW 5395 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FRW 5934 Special Topics in Language Literature (3).** Content and objectives to be determined by student and instructor.

**FRW 5938 Graduate Seminar (3).** Topic and approach to be determined by students and instructor. (Approval of the Department required.)

**GER 5060 German for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**GER 5061 German for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: GER 5060 or the equivalent.

**LIN 5207C Acoustic Phonetics (3).** Introduction to principles of acoustic and instrumental phonetics, including the physics of speech sounds and use of the sound spectrograph and other instruments. Prerequisites: LIN 3010 and one additional course in phonetics/phonology. Corequisite: One of the prerequisites may be counted as a corequisite.

**LIN 5601 Sociolinguistics (3).** Principles and theories of linguistic variation with special attention to correspondences between social and linguistic variables. Prerequisite: LIN 3010 or equivalent.

**LIN 5613 Dialectology (3).** The geography of language variation: linguistic geography, atlases, national and regional studies. Dialectology within a modern sociolinguistic frame work; research approaches. Prerequisites: LIN 3010 and one other graduate-level linguistics course.

**LIN 5625 Studies in Bilingualism (3).** Readings and analysis of bilingual programs and binational goals. Prerequisite: LIN 3010 or equivalent.

**LIN 5720 Second Language Acquisition (3).** Research, theories, and issues in second language acquisition. Topics include the Monitor Model, the role of the first language, motivation, age, individual differences, code-switching, and the environment; affective variables and attitudes.

**LIN 5760 Research Methods in Linguistics (3).** The collection and

analysis of linguistic data: sampling techniques, interviews, recordings, questionnaires, transcription, basic statistical procedures, including the use of computer analysis. Prerequisite: LIN 3010 or equivalent.

**LIN 5825 Pragmatics (3).** Study of the relationships between language form, meaning, and use. Special emphasis on speech act theory. Prerequisites: LIN 3010 or equivalent.

**LIN 6571 Discourse Analysis (3).** The study of the organization of language above the sentence level, such as conversational interactions and written texts. Prerequisite: LIN 3010.

**LIN 6934 Special Topics In Linguistics (3).** Content to be determined by students and instructor. (Approval of the Department required.)

*(See English listing for additional Linguistics courses.)*

**SPN 5060 Language for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**SPN 5061 Language for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: SPN 5060 or the equivalent.

**SPN 5525 Spanish American Culture (3).** A graduate survey of the major artistic phenomena in Latin America. Art, music, film, and literature will be discussed in their cultural context. Prerequisite: Graduate standing and permission of the instructor.

**SPN 5845 History of the Language (3).** Historical development of the Spanish language, primarily from the point of view of internal linguistic change. Spanish as an example of general processes of language development. Prerequisites: LIN 3010 and one other course in Spanish linguistics.

**SPN 5908 Independent Study (1-3).** Project, field experience, readings, or research.

**SPN 6505 Spanish Culture (3).** Selected development in language, literature, art, music, film, and the social institutions of Spain. Prerequisites: Graduate standing and permission of instructor.

**SPN 6535 The Hispanic Presence In the United States (3).** Readings in literature, culture, and language to illustrate the experience of the major

Hispanic groups in the United States. Prerequisites: Graduate standing and permission of the instructor.

**SPN 6930 Special Topics In Linguistics (3).** Content to be determined by students and instructor. (Approval of the Department required.)

**SPN 6970 Thesis Research (1-10).** Research toward completion of Master's Thesis. Repeatable. Prerequisite: Permission of Department.

**SPT 5118 Literature In Translation (3).** Masterpieces of world literature. Open to students who are proficient in more than one language.

**SPW 5155 Comparative Studies (3).** Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

**SPW 5237 The Traditional Spanish American Novel (3).** Study and analysis of the traditional Spanish novel as a form of art, from 19th century Lizardi's *El periquillo sarniento*, to 1950. The novels and authors studied are representative of 'costumbrismo', 'romanticismo', 'naturalismo', 'modernismo', and 'criollismo'.

**SPW 5277 Twentieth Century Spanish Novel, from 1956 to the Present (3).** Analysis of the Spanish novel from Ferlosio's *El Jarama* to the present. The perspective will be focused within historical, social, and artistic context. Representative authors such as Cela, Martín Santos, Umbral, Delibes, Benet, Goytisolo, and others will be included.

**SPW 5286 Contemporary Spanish American Novel (3).** A study of the Spanish American Novel from 1950. The course will intensively and extensively focus on the novelists who are best known for their innovations, defining and analyzing the qualities which give originality and newness both in themes and language.

**SPW 5346 Poetry of Jorge Guillen (3).** Selected readings from the five volumes of *Aire nuestro*. Emphasis on the techniques of close reading and explication. Related selections from Guillen's literary criticism.

**SPW 5358 Graduate Seminar: Prose and Poetry of Jorge Luis Borges (3).** Close readings of short stories and poetry. Emphasis on Borges's linguistic and cultural pluralism and the interplay of philosophy with fabulation.

**SPW 5359 Graduate Seminar: Poetry of Pablo Neruda (3).** Chronological examination of the major works of Chile's

Nobel Laureate. Related readings from Neruda's *Memories*. Emphasis on the poet's linguistic and aesthetic innovations.

**SPW 5425 Quevedo: Poetry (3).** Close reading of selected poems by Spain's greatest baroque poet and creator of modern Spanish satire, including poems on love, death, and metaphysical concerns, and a wide range of humorous poems.

**SPW 5426 Quevedo: Prose Satire (3).** Close reading of selected satires in prose by Spain's greatest baroque satirist and creator of modern Spanish satire. Includes Quevedo's picaresque novel *El Buscón*, and his *Suenos*, or *Visions of Hell*.

**SPW 5575 Spanish American Modernism (3).** An in-depth study of prose and poetry of one of the most important periods of Spanish American literature, focusing on Martí, Darío, Nájera, Casals, Silva, Valencia, Lugones, and Herrera y Reissig.

**SPW 5934 Special Topics In Language/Literature (3).** Content and objectives to be determined by student and instructor.

**SPW 6395 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry,) or the study of interaction between literary types (e.g. novel and drama).

**SPW 6936 Graduate Seminar (3).** Topic and approach to be determined by students and instructor. Prerequisite: Approval of the Department.

## Physics

**Richard A. Bone**, Associate Professor  
and Chairperson

**Yesim Darici**, Assistant Professor

**Rudolf Flebig**, Associate Professor

**Bernard Gerstman**, Associate  
Professor

**Kenneth Hardy**, Professor

**Jesus Marciano**, Assistant Professor

**Oren Maxwell**, Associate Professor

**Stephen L. Mintz**, Professor

**John W. Sheldon**, Professor

**Walter van Hamme**, Assistant  
Professor

**Xuwen Wang**, Assistant Professor

**James R. Webb**, Assistant Professor

## Master of Science in Physics

The Master of Science in Physics is a 45 semester hour program consisting of coursework at the 5000 and 6000 level and research with one of the departmental research groups culminating in a master's thesis. Students entering the program must have a bachelor's degree or equivalent coursework in Physics.

### Required Courses:

PHY 5115	Mathematical Physics I	3
PHY 5116	Mathematical Physics II	3
PHY 5240	Advanced Classical Mechanics	3
PHY 5346	Advanced Electromagnetic Theory I	3
PHY 5347	Advanced Electromagnetic Theory II	3
PHY 6645	Advanced Quantum Mechanics I	3
PHY 6646	Advanced Quantum Mechanics II	3
PHY 6524	Statistical Physics	3
PHY 6935	Graduate Research Seminar	4-6

In addition, three semester hours of specialized coursework are required in the student's area of specialization and 12-14 hours of thesis work for a total of 45 hours.

## Course Descriptions

### Definition of Prefixes

AST-Astronomy; PHS-Physics/Specialized; PHY-Physics; PHZ-Physics; PSC-Physical Sciences; ENU-Nuclear Engineering.

### AST 5215 Stellar Astrophysics (3)

Topics in Stellar Astrophysics, in greater detail and depth than similar

topics in AST 3213. Emphasis on current stellar structure, evolution models and the underlying observational data. Prerequisites: PHY 3124, PHY 3503, PHY 4324, PHY 4222 or equivalent.

**AST 5405 Extragalactic Astrophysics (3).** Topics in extragalactic astrophysics, in greater detail and depth than similar topics in AST 3213. Emphasis on galactic structure and evolution, quasars and cosmology.

**PHY 5115 Mathematical Physics I (3).** Methods of solution for problems in mathematical physics: Variational principles, complex variables, partial differential equations, integral equations, and transforms. Prerequisites: MAC 3313, MAP 3302.

**PHY 5116 Mathematical Physics II (3).** Additional solution methods in mathematical physics: Perturbation methods, Laplace's and Poisson's Equations, waves, special functions, vector fields, vector waves. Prerequisite: PHY 5115.

**PHY 5240 Advanced Classical Mechanics (3).** Advanced formulations of the equations of motion and their applications: the central field problem, rigid body dynamics, oscillations and continuous systems. Prerequisite: PHY 4222.

**PHY 5346 Advanced Electromagnetic Theory I (3).** Advanced treatment of classical electromagnetism: Electrostatics, Green's function, Laplace's equation, multipole expansion, magnetostatics, Maxwell's equations, waves. Prerequisite: PHY 4324.

**PHY 5347 Advanced Electromagnetic Theory II (3).** Additional topics in classical electromagnetism: Wave guides, radiating and diffracting systems, Kirchhoff's integral for diffraction, covariant formulation of field equations. Prerequisite: PHY 5346.

**PHY 5930 Seminar in Physics (1-3).** A series of specialized lectures/seminars on selected topics in Physics/Astro-Physics. Prerequisites: Permission of Department.

**PHY 5936 Special Topics Research (1-10).** Participation in an original investigation in theoretical or experimental physics/astro-physics under direct faculty supervision. Prerequisite: Permission of Instructor.

**PHY 5937, PHY 5938 Seminar in Special Topics (3).** Seminar work under the supervision of a faculty member on subject material of mutual interest.

**PHZ 6255 Molecular Biophysics (3).** The use of theoretical physics techniques to investigate biological systems: Protein structure and dynamics, electron tunneling, nuclear tunneling, hemoglobin, photosynthesis, vision. Prerequisite: PHY 4605.

**PHY 6524 Statistical Physics (3).** Fundamental principles of statistical mechanics; fluctuations, noise and irreversible thermodynamics; kinetic methods and transport theory. Prerequisites: PHY 3503 and PHY 4222.

**PHY 6645 Advanced Quantum Mechanics I (3).** Advanced topics in quantum mechanics: Quantized systems, relativistic quantum mechanics, potential scattering. Prerequisite: PHY 4605.

**PHY 6646 Advanced Quantum Mechanics II (3).** Additional topics in advanced quantum mechanics: Collision theory, symmetry transformations, conservation laws, group theory. Prerequisite: PHY 6645.

**PHY 6651 Quantum Scattering Theory I (3).** The investigation of atomic and electronic scattering processes: Potential scattering, long range potentials, electron-atom collisions. Prerequisite: PHY 6645.

**PHY 6652 Quantum Scattering Theory II (3).** The mathematical investigation of scattering processes: Autoionization, fast vs. slow collisions, Regge poles, S and T matrices. Prerequisite: PHY 6651.

**PHY 6668 Relativistic Quantum Field Theory I (3).** Introduction to relativistic quantum fields: General formalism, Klein-Gordon field, Dirac field, vector fields, interacting fields, CPT theorem, reduction formulae, gauge theory. Prerequisite: PHY 6646.

**PHY 6669 Relativistic Quantum Field II (3).** Additional topics in relativistic quantum fields: perturbation theory, U matrix, Wick's theorem, dispersion relations, renormalization, Ward identity, renormalization group, path integral formalism. Prerequisite: PHY 6668.

**PHY 6675 Quantum Theory of Many Particle Systems I (3).** An introduction to the physics of many particle systems: Second quantization, Fock spaces, Boson and Fermion symmetry, Gell-Mann-Low theorem, diagrammatic expansions, Goldstone theorem. Prerequisite: PHY 6646.

**PHY 6676 Quantum Theory of Many Particle Systems II (3).** Additional topics in the physics of many particle

systems: Fermi gas, Bose condensation, Hartree-Fock approximation, random phase approximation, finite temperature formalism, hadrons. Prerequisite: PHY 6675.

**PHY 6935 Graduate Research Seminar (1-2).** Seminars presented by students, faculty, and visitors on a variety of topics of current research interest. Repeatable. Required every semester.

**PHY 6970 Thesis Research (1-10).** Research toward completion of Master's Thesis. Repeatable. Prerequisite: Permission of Department.

**PHY 6971 Master's Thesis (3).** Theoretical and/or experimental research leading to thesis. Prerequisite: Permission of major professor.

**PHY 7980 Dissertation Research (1-9).** Students conduct dissertation research at the doctoral level in theoretical or experimental physics under faculty supervision. Prerequisite: Permission of instructor.

**PHY 5130 Theoretical Treatment of Experimental Data (3).** Statistical analysis of physical processes and statistical tests, with particular emphasis on instrumentation-related problems. Mathematical modeling and computer simulation. Prerequisite: Undergraduate statistics course, or equivalent, or permission of instructor.

**PHY 5234 Atomic and Molecular Collision Phenomena (3).** Investigation of atomic and molecular collision phenomena: Kinetic theory, elastic scattering, inelastic scattering, excitation and ionization, heavy particle collisions. Prerequisites: PHY 4605 and PHY 4222.

**PHY 5405 Solid State Physics (3).** Crystalline form of solids, lattice dynamics, metals, insulators, semiconductors, crystalline surfaces, and amorphous materials. Prerequisites: PHY 3124 or CHM 3411.

**PHY 5505 Low Energy Plasma Physics (3).** The investigation of the kinetics of rarefied gases and thermal plasmas: Phase space, random currents, orbit theory, plasma sheaths, radiation, the pinch effect. Prerequisites: PHY 3503, PHY 4324, and PHY 4222.

**PHY 5606 Special Relativity (3).** A detailed study of special relativity: Lorentz transformations, relativistic electrodynamics. Prerequisite: PHY 3124.

**PHY 6326 Low Energy Nuclear Physics I (3).** Introduction to the

physics of nuclei and nuclear processes: Nuclear forces, scattering processes and nuclear models. Prerequisite: PHY 4605.

**PHZ 6327 Low Energy Nuclear Physics II (3).** Additional topics in nuclear physics: The shell and collective models, nuclear reactions and applications, scattering theory, entrance channel phenomena, rearrangement collision and breakup reactions. Prerequisite: PHZ 6326.

**PHZ 6354 Introduction to Particle Physics (3).** An introduction to modern particle theory: Elementary field theory, symmetries, quantum electrodynamics, quark-parton model, quantum chromodynamics, Weinberg-Salam model. Prerequisite: PHY 6646.

**PHZ 6426 Advanced Solid State Physics (3).** Electronic structures of solids and surfaces, electron-electron interaction, superconductivity, magnetism in solids, amorphous systems, glasses, polymers, percolation, localization, phase transition, fractals. Prerequisites: PHY 4324 and PHY 4605.

## Political Science

**Joel Gottlieb, Associate Professor and Chairperson**

**Ronald Cox, Assistant Professor**

**Bruce Detwiler, Associate Professor**

**Eduardo Gamarrá, Associate Professor**

**Antonio Jorge, Professor**

**Brian Mirsky, Instructor**

**Dario Moreno, Assistant Professor**

**Brian Nelson, Associate Professor**

**Nicol Rae, Assistant Professor**

**Mark Rosenberg, Professor**

**Cheryl Rubenberg, Associate Professor**

**Rebecca Salokar, Assistant Professor**

**John Stack, Professor**

**Judith H. Stehm, Professor**

**Mary Volcansek, Professor**

**Christopher Warren, Associate Professor**

The Department of Political Science does not presently offer a degree program at the graduate level but does offer graduate courses. These courses are offered to supplement other graduate degree programs at the University.

## Course Descriptions

### Definition of Prefixes

**CPO-Comparative Politics;** **INR-International Relations;** **POS-Political Science;** **POT-Political Theory;** **PUP-Public Policy.**

**CPO 5036 Politics of Development (3).** This course examines divergent explanations for development and underdevelopment. Of central importance are the concepts and theories which emphasize the political dimensions of development, including theory and concept, processes of development, and actors in the development process.

**CPO 5935 Topics in Comparative Politics (1-6).** A rigorous examination of a topic in comparative politics. Subject matter varies according to instructor. Topic will be announced in advance.

**CPO 6936 Seminar in Comparative Politics (3).** Graduate seminar on special topic in comparative politics. Topic to be announced in advance.

**INR 5087 Ethnicity and the Politics of Development (3).** This course examines the conceptual and substantive dimensions of ethnicity in the context of world politics and political development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics.

**INR 5414 Topics in International Law (3).** An intensive examination of the political dimensions of international law in the context of rapidly changing global political relations.

**INR 5934 Topics in International Politics (1-6).** A rigorous examination of a topic in international politics. Subject matter varies according to instructor. Topic to be announced in advance.

**INR 6007 Seminar in International Politics (3).** Graduate seminar on special topic in international politics. Topic to be announced in advance.

**INR 6205 World Politics (3).** This course provides graduate students with an understanding of the major conceptual approaches to world politics. It emphasizes the analysis of significant actors, institutions, and processes at work in the contemporary global system as well as possible future alternatives.

**INR 6939 Seminar in International Law (3).** Allows for specialized and topical offerings by regular and visiting faculty. Also permits experimental courses.



**POS 5158 Topics in Politics (VAR).** Subject matter varies according to instructor.

**POS 5638 Topics in Public Law (1-6).** A rigorous examination of a topic in public law. Subject matter varies according to instructor. Topic will be announced in advance.

**POS 5706 Methodology (3).** This course is an introduction to the principal concepts and techniques of quantitative and non-quantitative methodology in the social sciences. It is designed to familiarize the student with the language and format of quantitative and non-quantitative applications in order to permit students to deal effectively with the literature of their field.

**POS 5909 Independent Study (1-6).** Designed for advanced students who wish to pursue specialized topics in political science. Arrangements must be made with instructor during prior semester.

**POS 5932 Topics in Urban Politics (VAR).** An extensive examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is on the ways in which urban problems are identified and proposed solutions formulated, legitimized, and administered by urban policy-making processes. Includes a discussion of urban political culture. Enables the student to understand the major problems confronting communities in urban areas.

**POS 6146 Seminar in Urban Politics (VAR).** Graduate seminar on special topics in urban politics. Topic to be announced in advance.

**POS 6934 Seminar in Politics (VAR).** Subject matter varies according to instructor.

**POS 6939 Seminar in Public Law (VAR).** Graduate seminar on special topic in public law. Topic to be announced in advance.

**POS 6971 Thesis (1-6).** Requires students to enroll for thesis or dissertation research for at least one credit hour every semester in which they are engaged in such research. Prerequisites: All other coursework for the Master's in International Studies.

**POT 5934 Topics in Political Theory (VAR).** An intensive examination of selected topics dealing with political theory. Subjects will vary, depending upon the desires of students and facul-

ty. Allows the student to choose topics of particular interest to him or her.

**PUP 5934 Topics in Public Policy (1-6).** A rigorous examination of a topic in public policy. Subject matter varies according to instructor. Topic will be announced in advance.

**PUP 6007 Seminar in Public Policy (1-6).** Graduate seminar on special topic dealing with public policy analysis. Subject matter varies according to instructor. Topic to be announced in advance.

## Psychology

**Scott Fraser, Associate Professor and Chairperson**

**Lorraine Bahrack, Associate Professor**

**Milton Blum, Professor Emeritus**

**Brian Cutler, Associate Professor**

**Marvin Dunn, Associate Professor**

**Joan Erber, Professor**

**Luis Escovar, Associate Professor**

**Gordon Finley, Professor**

**Ronald Fisher, Professor**

**Arthur Flexser, Associate Professor**

**Jacob Gewirtz, Professor**

**Edward Girden, Distinguished**

**Professor Emeritus**

**Fernando Gonzalez-Relgosa,**

**Associate Professor**

**David Kravitz, Assistant Professor**

**William Kurtines, Professor**

**Mary Levitt, Associate Professor**

**Gary Moran, Professor**

**Janet Parker, Associate Professor**

**James Rotton, Associate Professor**

**Juan Sanchez, Assistant Professor**

**Bernard Saper, Professor**

**Wendy Silverman, Professor**

## Master of Science in Psychology

The Masters of Science in Psychology program at the University is designed to train practitioners and researchers who can function in a variety of applied settings. The core curriculum and admission prerequisites are intended to provide students with a base of knowledge in psychology. A distinctive feature of the program is its emphasis on a close working relationship between student and faculty. Under faculty supervision, students are encouraged to develop individually tailored programs of study that reflect both student interests and program strengths.

The curriculum consists of 36 semester hours of graduate study in which the exposures focus specifically on training the student to perform the skills mentioned above. Students are expected to select electives, project/thesis topics, and supervised field experiences that meet not only the degree requirements, but also their academic interest and particular professional objectives. Six of the 36 semester credit hours consist of Master's thesis credits.

## Doctor of Philosophy in Psychology

The doctorate program in psychology has a two-fold focus: (1) Life-span development (2) applied psychology. The program emphasizes normal development as well as cross-cultural and urban perspectives on the life span and legal and industrial/organizational applied psychology. The emphasis is on academic quality and the curriculum is designed to foster a commitment both to basic research and to application as an integral part of the individual student's specialty area development. The curriculum offers a broad background in life-span development and applied psychology while encouraging the development of an area of specialization early in graduate training.

Students are expected to master a series of core-course requirements designed to facilitate a thorough grounding in theory, methodology, and content both in basic and applied research. In addition, a number of seminars reflecting specialized foci are offered. Students are also required to pursue specific areas of interest through independent study with individual faculty members and through apprenticeship with a primary advisor for the purpose of acquiring direct research experience.

## Graduate Admission Requirements

The following are in addition to the University's Graduate Admission Requirements:

1. A 3.0 or higher GPA during the last two years as an upper division student or a total score (quantitative plus verbal) of 1,000 or higher on the GRE for the Master's degree. A 3.0 or higher GPA and a GRE verbal and quantitative of 1100 or higher are required for the Ph.D. degree. Foreign students whose native language is not English must take the Test of English as a Foreign Language (the TOEFL examination) and obtain a 500 score of higher.

2. The GRE and GPA stated above are only minimum requirements. All applications are reviewed by the Graduate Studies Admission Committee, which makes the final admissions decisions. Since admission to the program is competitive, the committee's requirements are normally higher than the minimum aforementioned standards.

## Graduate Admissions Procedures

Applicants must submit the following to the Graduate Studies Admission Committee, Department of Psychology, Florida International University, Miami, Florida 33199:

1. A photocopy of the admission application submitted to the Admissions Office.

2. A brief essay stating the reasons for the interest in the program and career goals.

3. Three letters of recommendation, preferably from previous instructors and/or persons familiar with applicant's academic background.

Applicants to the program who are not psychology majors may be accepted conditionally until they meet the category requirements, listed below, early in their graduate career. A maximum of nine semester hours credit earned in the non-degree seeking student category exclusive of prerequisite undergraduate courses may be applied to graduate degree requirements. The undergraduate course requirements are designed to make certain that students accepted into the graduate program have a broad base of dependable psychological knowledge and acquaintance with the basic methodologies upon which the discipline is founded.

**Category A.** Satisfactory completion of one psychology laboratory or research methods course.

**Category B.** Satisfactory completion of introductory upper division statistics.

## Course Descriptions

### Definition of Prefixes

CLP-Clinical Psychology; CYP-Community Psychology; DEP-Developmental Psychology; EAB-Experimental Analysis of Behavior; EDP-Educational Psychology; EXP-Experimental Psychology; INP-Industrial and Applied Psychology; LIN-Linguistics; PCO-Psychology for Counseling; PPE-Psychology of Personality; PSB-Physiology; PSY-Psychology; SOC-Sociology; SOP-Social Psychology; SPA-Speech Pathology and Audiology.

**CLP 5166 Advanced Abnormal Psychology (3).** Advanced study of the causes, psychopathology manifestations, and social and personal consequences of behavior disturbance. Emphasis is placed on the critical examination of current research on the biological, psychological, and social aspects of these disorders. Clinical approaches to diagnosis, course, and prognosis in the contemporary mental health context (including 'practicum' assignments if feasible) are covered.

**CLP 5175 Personality Dynamics (3).** A review of different approaches to the study of personality dynamics and of the related therapeutic modalities. Special consideration is given to psychoanalysis and neo-analytic psychology. Other therapeutic models which influence current psychological thought are also considered. Prerequisites: Successful completion of a course in theories of personality, or equivalent. Permission of instructor.

**CLP 5185 Current Issues In Mental Health (3).** A critical, intensive examination of selected, important issues in mental health. Emphasis is given to the empirical study of contemporary problems related to the making of mental patients; planning, programming, and administering mental health services; political, ethical, and legal constraints on the operation of mental health facilities; interdisciplinary cooperation among helping and human service professionals; and evaluation of preventive care and treatment services. Prerequisite: Abnormal Psychology or permission of the instructor.

**CLP 5931 Ethical Code In Psychological Practice (2).** An examination of the ethical standards for psychological practice as established by the American Psychological Association, and the Association's standards for delivery of psychological services. Prerequisite: Admission to graduate study in psychology; (other graduate students admitted by permission of instructor).

**CLP 6168 Psychopathology Across the Life-Span (3).** Exploration of the causes of psychopathology from a life-span developmental orientation and implications for theories of personality. Prerequisites: CLP 5166 and permission of instructor.

**CLP 6395 Forensic Psychology (3).** This course surveys the practical and ethical issues surrounding the interface between clinical psychology and the

law. Prerequisite: CLP 4144, CLP 6168 or equivalent of either.

**CLP 6436 Introduction of Psychological Assessment (3).** This course provides instruction in the principles and methods underlying the administration, construction and evaluation of psychological tests and measures. Prerequisite: Graduate standing.

**CLP 6437 Behavioral Assessment in Childhood (3).** Standardized tests and inventories for the behavior assessment of infants, children, and adolescents will be surveyed. Prerequisites: Proseminar courses and second year graduate standing.

**CLP 6438 Psychological Assessment (3).** Theory, research, and applications of psychological assessment in areas such as interviewing, intellectual and cognitive functioning, and personality testing. May be repeated for credit with different subject matter. Prerequisite: STA 3122 and permission of instructor.

**CLP 6498 Diagnosis and Treatment of Sexual Disorders (3).** Clinical examination of sexual functioning, emphasizing disorders of gender identity, paraphilias and other dysfunctions and intimacy problems. Prerequisite: Graduate standing or permission of instructor. Corequisites: SOP 3772 or equivalent.

**CLP 6945 Clinical Practicum In Psychology (1-3).** Supervised experience in clinical techniques and methods. Prerequisites: Graduate standing & permission of instructor.

**CYP 5534 Groups as Agents of Change (3).** Theory and practice in utilizing groups as agents of change or development in communities and organizations. Didactic presentation and structured exercises focus on relevant issues. Students design and implement problem-focused interventions, using class as client system.

**CYP 5954 Community Psychology Field Experiences II (5).** Same orientation and description as Field Experience I. Students in this course will be able to pursue their work with community institutions in more depth. Prerequisite: Students enrolled in this course must have completed Community Psychology Field Experiences I.

**CYP 6055 Psychological Theories and Research on Acculturation and Multiculturalism (3).** A review of theories and research on acculturation and multiculturalism concepts with an emphasis on those models that have

generated a substantial body of empirical research. Stress will be placed on the implications of these findings for community stability and disruption as well as the implications for the delivery of human services in multicultural settings.

**CYP 6526 Psychological Methods of Program Evaluation (3).** Development of skills for the psychological assessment monitoring and evaluation of human service programs with emphasis on the application of basic principles of behavioral science research in the field, exclusive of public school settings.

**CYP 6536 Principles and Methods of Psychological Consultation (3).** An analysis of the basic psychological approaches underlying consultation, with special emphasis on the practical application of the processes of learning, cognition, and interpersonal relations to techniques of consulting with various 'target' agencies, individual clients, and other professionals in community settings. Prerequisite: Graduate standing at FIU or permission of instructor.

**CYP 6766 The Psychology of Crosscultural Sensitization in a Multicultural Context (3).** A series of weekly seminars to increase student sensitivity to working with clients from different cultural backgrounds. The objectives of the course are: (1) facilitating student awareness of cultural differences and their impact on social and human services delivery systems, (2) identifying the student's own personal cultural biases and values when interacting with culturally different persons, and (3) teaching students to develop culturally appropriate intervention skills.

**CYP 6936 Current Issues in Community Psychology (3).** An intensive analysis of contemporary theoretical, practical, and professional aspects of the field of Community Psychology. Topics discussed may lead to the graduate project required of each student. Prerequisite: Admission to graduate study in psychology (other graduate students admitted by permission of instructor).

**DEP 5056 Issues in Life-Span Developmental Psychology: Infancy through Old Age (3).** A survey in depth of theories, issues, methods, and data in life-span developmental psychology through the entire age range. Prerequisites: DEP 3001 or DEP 4464, or their equivalents, are recommended.

**DEP 5058 Biological Basis of Behavior Development (3).** Introduction to theory and research underlying behavioral development. Covers such pre- and post-natal determinants as evolution, genetics, neuroendocrines, as well as social development, behavioral ecology, and sociobiology. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminar courses.

**DEP 5068 Applied Life Span Developmental Psychology (3).** This course is designed to acquaint the student with various applications in life-span developmental psychology. An overview of general issues and areas of application is offered, and specific applications are considered. Prerequisite: Graduate standing or permission of instructor.

**DEP 5099 Proseminar in Infancy, Childhood, and Adolescence (3).** Provides a comprehensive review of issues in perceptual, cognitive, social, emotional, and personality development from infancy through adolescence. Prerequisite: Graduate standing or permission of instructor. Corequisite: Pro-seminars.

**DEP 5118 Current Issues in Cognitive and Perceptual Development in Infancy (3).** Provides an in-depth analysis of current issues, methods, research and theory of cognitive and perceptual development during the first year of life. Special emphasis on object and event perception, memory, and imitation. Prerequisites: Two courses in developmental psychology - any level recommended.

**DEP 5405 Proseminar in Psychology of Adulthood and Aging (3).** A comprehensive review of topics in adulthood and aging including: biological changes, social processes, work, family, cognition, memory, personality, and psychopathology. Prerequisite: Graduate standing or permission of instructor.

**DEP 5608 Theoretical Perspectives in Developmental Psychology (3).** The focus of this course is on the major paradigms, models, and theories that have been influential in developmental psychology, both historically and contemporaneously. Meta-theoretical issues, paradigmatic influences, and specific theories are considered. Prerequisite: Graduate standing or permission of instructor.

**DEP 5725 Research Seminar in Psychosocial Development (1).** This course is designed to develop research

skills and competencies in the area of psychosocial development. The emphasis of the course is on involvement in original research. Prerequisite: Permission of instructor. Corequisite: Senior undergraduate or graduate standing.

**DEP 5796 Methods of Developmental Research (3).** Survey of issues and methods at all stages of life-span developmental research including theory, methods, design, and data reduction. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminars.

**DEP 6117 Psychology of Caregiving (3).** A survey of theory and research on the effects of caregiving/parenting behaviors, and conditions on behavior outcomes in offsprings, both for infra humans and humans. Prerequisite: Graduate standing or permission of instructor.

**DEP 6145 Psychology of Culture and Childhood (3).** Extensive cross-cultural readings will serve as the focus for seminar discussion of cultural influences on children's biological, motor, perceptual, cognitive, social, and personality development. Prerequisite: Graduate standing or permission of instructor.

**DEP 6186 Social Development and Learning (3).** Theories and facts of socio-emotional development, learning, and the acquisition and maintenance of social relationships in early life are examined critically. Prerequisites: DEP 3000 or DEP 3001 or equivalent.

**DEP 6465 Psychology of Culture and Aging (3).** An intensive examination of cultural influences on social and psychological aging processes including minority aging and involving seminar discussion and independent projects. Prerequisite: Graduate standing.

**DEP 6466 Cognitive Processes in Aging (3).** An intensive analysis of the background and recent developments in the area of age changes and age differences in intellectual functioning and learning memory processes. Prerequisite: DEP 5405.

**DEP 6477 Psychology of Social Processes in Aging (3).** An intensive analysis of the background and recent developments in theoretical models of social development, personality processes, and social processes in the older adult. Prerequisite: DEP 5405.

**DEP 6645 Cognitive and Language (3).** Course covers the acquisition of

cognitive processes and language, and their interdependence. Theory and research focusing on innate vs. learned aspects are discussed. Prerequisite: Graduate standing or permission of instructor.

**DEP 6936 Current Literature in the Psychology of Infancy, Childhood, and Adolescence (3).** This seminar will present and evaluate current research articles in the major journals in infant, child, and adolescence psychology. Prerequisite: Second year graduate standing.

**DEP 6937 Current Literature in the Psychology of Adulthood and Aging (3).** This seminar will present and evaluate current research articles in the major journals in the psychology of adulthood and aging. Prerequisite: Second year graduate standing.

**DEP 6945 Life-span Developmental Psychology Practicum (3).** This is an individually tailored program where students will work in an agency on a specific problem or project, culminating in a final written report. Prerequisite: Second year graduate standing.

**DEP 7069 Seminar in Life-Span Cognitive Developmental (3).** This graduate seminar will examine, through intensive reading and seminar discussion, the major theories, issues and empirical research on cognitive growth, change and decline from infancy through old age. Prerequisites: Two courses in Developmental Psychology (any level).

**DEP 7096 Seminar in Psychology of Life-Span Social Development (3).** This course includes a consideration of general issues and discussion of the application of life-span models to selected topics development. Prerequisite: Graduate standing or permission of instructor.

**EAB 5655 Advanced Methods of Behavior Change (3).** An intensive study of selected methods of modifying human behavior, emphasizing the applications of the principles of respondent and operant conditioning, as well as those derived from modern social learning theories. Practice and role playing opportunities are provided in behavior therapy, relaxation therapy, behavior modification, biofeedback or similar behavioral approaches. Prerequisites: EAB 4794, CLP 4374, CYP 4144; enrollment in an authorized program; equivalent background; or permission of instructor.

**EAB 6707 Developmental Behavior Analysis (3).** A survey of the application of the principles, methods, and applications of experimental behavior analysis to various life-span segments and developmental themes. Prerequisites: EAB 3002, EAB 4794, or equivalent, or permission of instructor.

**EOP 6935 Special Topics in Educational Psychology (VAR).** An intensive analysis of a particular topic in educational psychology. Students must have topics approved by the instructor prior to registration. Open only to advanced and graduate students in the College of Education.

**EXP 5099 Proseminar in Experimental Psychology (3).** Provides a comprehensive review of current research and theory in areas such as learning, memory, cognition, sensation, and perception. Prerequisite: Graduate standing or permission of instructor.

**EXP 5406 Theories of Learning (3).** The major theoretical systems of learning are covered, with the intent of determining how well each accounts for the phenomena of learning. Emphasis is placed on exploring the controversial issues raised by extant theories, and the experimental resolution of these theoretical controversies. The impact of theory on current thinking about learning is considered.

**EXP 5508 Applied Cognitive Psychology (3).** Covers the basic theories of cognitive psychology perception, attention, memory, learning, knowledge, with emphasis on application to real-world problems. Prerequisite: Graduate Standing.

**EXP 7747 Practicum in Causal Modeling (3).** Introduction to linear structural relations models, emphasizing logical and practical problems in inferring causation for experimental and correlational research designs.

**INP 5095 Proseminar in Industrial Psychology (3).** Provides coverage of industrial and personnel psychology topics such as job analysis, personnel recruitment and selection, legal aspects of employment, performance appraisal, and training design and evaluation. Prerequisites: Acceptance to Master's or Ph.D. program in Psychology.

**INP 5136 Psychology of Legal Consultation (3).** Practice in basic non-clinical areas in which psychologists assist attorneys, including jury selection, surveys, and simulations. Prerequisite: SOP 6098 or equivalent.

**INP 6235 Applied Psychology of Training and Development (3).** In-depth study of principles of behavior and attitude change in organizations. Topics include organization analysis, program design and implementation, and evaluation of results. Prerequisites: Acceptance to M.S. or Ph.D. program in Psychology and SOP 5616.

**INP 6940 Strategies and Methods of Applied Psychological Research (3).** A practicum course in the psychological research strategies and the application of computers in the analyses of psychological data.

**LIN 5701 Psychology of Language (3).** An overview of the psychology of language and the psychological 'reality' of linguistic structure. Behavioristic vs. cognitive views of psycholinguistics are examined. Consideration is given to the biological bases of language and thought, language acquisition, and language pathology.

**PCO 6206 Principles & Practices of Counseling & Psychotherapy (3).** Examination of the principles & practices of counseling and psychotherapy derived chiefly from cognitive behavioral psychology. Prerequisite: Graduate standing.

**PSY 5206C Fundamentals of Design of Experiments (3).** CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3122 and 3123, or their equivalents.

**PSY 5246C Multivariate Analysis in Applied Psychological Research (3).** Covers basic techniques of multivariate analysis, emphasizing the rationale and applications to psychological research. Includes multiple regression, Hotelling's T<sup>2</sup>, MANOVA, principle component analysis, and factor analysis. Prerequisite: STA 3123 or equivalent; linear algebra recommended.

**PSY 5908 Directed Individual Study (VAR).** Under the supervision of an instructor in the graduate degree program, the graduate student delves individually into a topic of mutual interest which requires intensive and profound analysis and which is not available in a formal offering. May be repeated once. Prerequisite: Permission of instructor.

**PSY 5917 Psychology Research Proseminar (3).** Specialized research and presentation to faculty members in his or her major research area. Semi-

nar style. This course is intended as a core course for the masters program in psychology. Prerequisite: Full graduate admission.

**PSY 5918 Supervised Research (VAR).** Research apprenticeship under the direction of a research professor or a thesis advisor. Prerequisite: Full graduate admission.

**PSY 5939 Special Topics in Psychology (VAR).** Special topics will be announced in advance.

**PSY 6956 Psychology Field Experience (VAR).** Placement of students in applied settings for the purpose of developing community-based experience in the application of theoretical and methodological approaches. Prerequisite: Graduate standing.

**PSY 6971 Master's Thesis in Psychology (3-6).** Supervised research on an original research project submitted in partial fulfillment of Master's degree requirement.

**PSY 7940 Supervised Teaching in Psychology (1).** Supervised teaching under the guidance of faculty advisor. May be repeated only three times. Prerequisite: Doctoral graduate study.

**PSY 7980 Dissertation Research in Psychology (3-12).** Supervised research on an original research project submitted in partial fulfillment of doctoral degree requirements. Prerequisite: Admission to candidacy.

**SOP 5058 Proseminar in Social Psychology (3).** An in-depth examination of the role of social psychology in the social sciences and the major substantive problems as they relate to contemporary societal issues. Minimum Prerequisite: An introductory course in social psychology or its equivalent.

**SOP 5316 Theories and Methods of Cross-Cultural Research (3).** An intensive analysis of contemporary theories and methods of cross-cultural research in psychology including topics such as: culture as a research treatment, differential incidence of personality traits, the use of ethnographies, 'etic' vs. 'emic' distinction. Prerequisite: Graduate standing or permission of instructor.

**SOP 5616 Social Psychology of Organizations (3).** The application of concepts and theories from social psychology and sociology to the organizational setting. Emphasis would be on role theory, value formation and the operation of norms, including their

development and enforcement. Formal and informal organization structure, power and authority concepts, and leadership theories will be covered. Communication processes and networks and their effects on task accomplishment and satisfaction will be included.

**SOP 6098 Proseminar in Legal Psychology (3).** The application of psychological research methods and psychological knowledge to contemporary issues in criminal and civil litigation. Prerequisite: Graduate Standing.

## Sociology and Anthropology

Guillermo Grenler, Associate

Professor and Chairperson

Jerald B. Brown, Associate Professor

Janet Chernela, Associate Professor

Stephen Fjellman, Professor

Chris Girard, Assistant Professor

Hugh Gladwin, Associate Professor

James Ito-Adler, Assistant Professor

Antonio Jorge, Professor

A. Douglas Kincaid, Associate

Professor and Associate Director,

LACC

Barry B. Levine, Professor

Kathleen Logan, Associate Professor

Shearon A. Lowery, Associate

Professor

Anthony P. Mainiot, Professor

James A. Mau, Professor and Provost

Betty Morrow, Associate Professor

William T. Osborne, Associate

Professor

Lisandro Perez, Associate Professor

Patricia R. Pessar, Associate

Professor

Alejandro Portes, Patricia and Phillip

Frost Endowed Professor

Alex Steplek, Associate Professor and

Director, Comparative Sociology

Graduate Program

William T. Vickers, Professor

Lola West, Assistant Professor

The M.A. program in Comparative Sociology provides students with advanced educational opportunities in social science research and analysis leading to professional-level competence and employment opportunities in higher education, government service, and the private sector. This M.A. program can also serve as preparation for doctoral-

level studies in Sociology and Anthropology. The M.A. curriculum emphasizes our faculty strengths in Sociology, Sociocultural Anthropology, and cross-cultural research, and provides a strong foundation in social theory and methods. Selected electives, graduate colloquiums, and a research thesis complete the requirements for the M.A. in Comparative Sociology.

### Admission Requirements

Application to the Master of Arts program in Comparative Sociology is made through FIU's Office of Admissions. The minimum requirements for admission include:

1. A baccalaureate degree from an accredited college or university;
2. A 3.2 grade point average (GPA) or higher during the last two years of the undergraduate program, or a combined score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination (GRE);
3. Two letters of reference from former instructors or others who are able to evaluate the applicant's potential for graduate study;
4. Foreign students whose native language is not English must take the TOEFL (Test of English as a Foreign Language) and obtain a score of 500 or higher.

Each applicant to the program must complete a graduate application form, and arrange for the sending of official transcripts of all prior college work, an official report of GRE scores, and letters of reference to the Office of Admissions. An application will not be processed until the file is complete.

Applications for admission are evaluated by the Departmental Graduate Studies and Assistantship Committee. Admissions are competitive, so the meeting of the minimum requirements does not guarantee acceptance into the M.A. program.

A baccalaureate major in Sociology or Anthropology is not required for admission to the M.A. Program in Comparative Sociology. Beginning graduate students who have no prior coursework in Sociology, Anthropology, or Statistics may be required to take one or more undergraduate courses as prerequisites for graduate courses (based on the Graduate Committee's evaluation of the student's undergraduate record).

### Degree Requirements

The M.A. in Comparative Sociology requires a total of 36 semester hours of credits, including 15 credits in core courses, 15 credits in electives, and a

master's thesis based upon the student's original research (including 6 credits of enrollment in SYA 6975 Thesis). A maximum of six credits of graduate coursework may be transferred from other institutions, subject to the approval of the Graduate Committee.

#### Required Courses (36):

SYA 6125	Classical Social Theories 3
SYA 6126	Contemporary Social Theories 3
SYA 6305	Research Methods I 3
SYA 6306	Research Methods II 3
SYA 6925	Graduate Colloquium in Comparative Sociology (1 credit course taken three times) 3
Four electives in Sociology and Anthropology (must be at the 5000-level or higher)	12
One elective in another department (must be numbered 5000 or above and be approved by the graduate advisor)	3
SYA 6975	Thesis 6

#### Graduation Requirements

To remain in good standing and to qualify for graduation, students must maintain a graduate GPA of 3.0 or higher. All M.A. course requirements must be met and a thesis must be completed and accepted after presentation to a Thesis Committee chosen by the student's and the Thesis advisor. All requirements for the M.A. in Comparative Sociology, including the successful defense of the thesis, must be completed within six years of the first enrollment in the graduate program.

#### Course Descriptions

##### Definition of Prefixes

ANT-Anthropology; DHE-Demography & Human Ecology; HUS-Human Services; LIN-Linguistics; MAF-Marriage & Family; SYA-Sociological Analysis; SYD-Sociology of Demography and Area Studies; SYG-Sociology, General; SYO-Social Organization; SYP-Social Processes.

**ANT 5318 American Culture and Society (3).** Anthropological analysis of the cultures and subcultures of the United States, focusing on the social, ethnic, and regional organizations and their corresponding value and symbolic systems. Prerequisite: Graduate standing or permission of instructor.

**ANT 5496 Social Research and Analysis (3).** A graduate overview of the scientific methods used in intercultural studies. Includes the philosophical

basis of science, research design, and hypothesis testing using both secondary and original data. Students will conduct a research project in this course. Prerequisite: Graduate status or permission of the instructor.

**ANT 5548 Ecological Anthropology (3).** Theories of human adaptation, including environmental determinism, possibilism, cultural ecology, materialism, and evolutionary ecology. Credit for both ANT 3403 and ANT 5548 will not be granted. Prerequisite: Graduate standing or permission of instructor.

**ANT 5908 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**ANT 5915 Directed Field Research (VAR).** Permission of instructor required.

**ANT 6931 Seminar on Latin America (3).** Analysis of Latin American cultures and classes using case studies. Students read a series of anthropological or sociological works and discuss them in a seminar format. Prerequisite: Graduate standing or permission of instructor.

**ANT 6932 Seminar in Human Ecology (3).** Analysis of human ecology using case studies. Students read a series of works on human adaptations and discuss them in a seminar format. Prerequisite: ANT 3403 or ANT 6548 or equivalent.

**SYA 5135 Sociology of Knowledge (3).** The study of the theoretical basis of knowledge and the inter-relatedness of knowledge and social factors, particularly as knowledge relates to institutional forms of behavior.

**SYA 5909 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**SYA 5941 Directed Field Research (VAR).** Permission of instructor required.

**SYA 6125 Classical Social Theories (3).** Classical social theories of the 19th and early 20th centuries. Includes the ideas of such thinkers as Spencer, Comte, Durkheim, Marx, Weber, Simmel, Pareto, Morgan, Tylor and Boas. Prerequisite: Graduate standing or permission of instructor.

**SYA 6126 Contemporary Social Theories (3).** The major currents and trends in contemporary sociological theory. Emphasis on the application of

theories to specific research issues and practices. Prerequisite: Graduate standing or permission of instructor.

**SYA 6305 Research Methods I (3).** The first in a two course sequence on research methods in comparative sociology. Includes research design and hypothesis testing, participant observation, interviewing techniques and survey research. Prerequisite: Graduate standing or permission of instructor.

**SYA 6306 Research Methods II (3).** The second in a two-course sequence on research methods in comparative sociology. Includes the quantitative analysis of sociological research data, and the preparation of written reports and articles. Prerequisite: SYA 6305 and STA 3111 or STA 6166 or equivalent.

**SYA 6925 Graduate Colloquium in Comparative Sociology (1).** Colloquiums presented by faculty, visiting scholars, and graduate students on topics of current research interest. Repeatable. Prerequisite: Graduate standing.

**SYA 6943 South Florida Area Study (3).** Current issues in South Florida studied through large-scale survey research conducted by class members. Provides experience in research techniques and the development and testing of theory. Prerequisites: SYD 6625 and SYA 6305.

**SYA 6975 Thesis (1-6).** Registration for students working on the thesis for the M.A. in Comparative Sociology or the M.A. in International Studies. Prerequisite: All other course work for the M.A. in Comparative Sociology or International Studies.

**SYD 5045 Demographic Analysis (3).** The study of the processes that determine the size and composition of human populations. Emphasis on demographic transition theory and the antecedents and consequences of differential growth rates throughout the world. Prerequisite: Graduate standing or permission of the instructor.

**SYD 6236 International Migration and Refugees (3).** Comparative analysis of the causes, consequences, and policies concerning population movements across national borders. Includes review of various theories of labor migration. Students will conduct research on a migration or refugee topic. Prerequisite: Graduate standing or permission of instructor.

**SYD 6325 Seminar in the Comparative Sociology of Gender (3).** The examination of women's and men's roles, statuses, and life opportunities from a historical and comparative perspective. Current theoretical developments in the study of gender are emphasized. Prerequisite: Graduate standing or permission of instructor.

**SYD 6427 Seminar in Comparative Urban Issues (3).** Current theoretical developments in the study of urbanism, including the evolution and growth of cities, spatial and social structures, migration, and the critical problems of social life in cities. Prerequisite: Graduate standing or permission of instructor.

**SYD 6615 Seminar in Comparative Analysis of Selected Regions (3).** Comparative social analysis using studies from two or more world regions. Students read a series of works on issues such as bureaucracy, modernization, and development, and discuss them in a seminar format. Prerequisite: Graduate standing or permission of instructor.

**SYD 6625 South Florida Socio-cultural Systems (3).** The sociological and anthropological analysis of South Florida. Presents tools for regional study including demography, cultural ecology, and ethnic group-centered symbolic systems. Prerequisite: Graduate standing or permission of the instructor.

**SYD 6655 Seminar on Social Change in Asia (3).** An examination of social change in contemporary Asia, including the relationships between states, the changing political economies, and the role of social movements and cultural institutions in change. Prerequisite: Graduate standing or permission of instructor.

**SYD 6705 Comparative Analysis of Ethnicity and Race (3).** Consideration of major theories of ethnicity and race and analysis of selected ethnic groups in various world regions. Includes the study of race and ethnic issues in Miami and the South Florida region.

**SYO 6135 Advanced Comparative Family Systems (3).** Comparative study of the family as an institution adapting to social and economic conditions. Cultural variation in marriage, parenthood and gender roles. Historical influences on the pluralistic American family. Credit for both SYO 4130 and SYO 6135 will not be granted. Prerequisite: Graduate standing or permission of the instructor.

**SYD 5447 Sociology of International Development (3).** To introduce the basic concepts and questions of the field as applied to the international arena. To illustrate the common areas of social science analysis in dealing with questions of international development.

**SYD 6306 Comparative Social Movements (3).** Comparative analysis of social movements and social change, including peasant movements, environmentalism, civil rights, feminism, and nationalism. Competing theories of social movements are examined. Prerequisite: Graduate standing or permission of the instructor.

**SYD 6907 Seminar in Comparative Social Change (3).** The cross-cultural and comparative analysis of contemporary social change, including processes of social action such as terrorism, reformism, revolution, and the use of electoral systems and democratic processes. Prerequisite: Graduate standing or permission of the instructor.

## Statistics

**Carlos W. Brain, Associate Professor and Chairperson**

**Ling Chen, Assistant Professor**

**Gauri L. Ghal, Associate Professor**

**Sneh Gulati, Assistant Professor**

**Ira Parks Howell, Lecturer**

**Jie Mi, Assistant Professor**

**Laura Reiser, Instructor**

**Samuel S. Shapiro, Professor and**

**Associate Dean**

**Hassan Zahedi-Jasbi, Associate**

**Professor**

**Jyoti N. Zalkikar, Assistant Professor**

The Department of Statistics does not presently offer a degree program at the graduate level but does however offer graduate courses. These courses are offered to supplement other graduate degree programs at the University.

## Course Description

### Definition of Prefixes

STA - Statistics. MAP - Mathematics/ Applied.

**MAP 5117 Mathematical and Statistical Modeling (3).** Study of ecological, probabilistic, and various statistical models. Prerequisites: MAC 3313,

COP 2210 or CGS 3420, MAS 3105; and STA 3322 or STA 3164 or STA 3033.

**STA 5126/PSY 5206 Fundamentals of Design of Experiments (3).** CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3123 or STA 3112 or equivalent.

**STA 5206 Design of Experiments I (3).** Design and analysis of completely randomized, randomized block, Latin square, factorial, nested and related experiments. Multiple comparisons. Credit for both STA 4202 and STA 5206 will not be granted. Prerequisite: STA 3322 or STA 3164 or STA 3033 or (STA 3163 and STA 3321).

**STA 5207 Topics in Design of Experiments (3).** This applied course in design of experiments covers topics such as split-plot design, confounding, fractional replication, incomplete block designs, and response surface designs. Prerequisite: STA 5206.

**STA 5236 Regression Analysis (3).** Simple, multiple and polynomial regression, analysis of residuals, model building and other related topics. Credit for both STA 4234 and STA 5236 will not be granted. Prerequisites: STA 3164 or STA 3123 or STA 3112, and MAS 3105.

**STA 5446-STA 5447 Probability Theory I and II (3-3).** This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory, covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems, and law of iterated logarithm. Prerequisite: MAC 3313.

**STA 5505 Nonparametric Methods (3).** Distribution-free tests: sign, Mann-Whitney U, Wilcoxon signed rank, Kruskal-Wallis, Friedman, etc. Rank correlation, contingency tables and other related topics. Credit for both STA 4502 and STA 5505 will not be granted. Prerequisite: First course in statistics.

**STA 5676 Reliability Engineering (3).** The course material is designed to give the student a basic understanding of the statistical and mathematical techniques which are used in engineering reliability analysis. A review will be made of the basic fundamental statistical techniques required. Subjects

covered include: distributions used in reliability (exponential, binomial, extreme value, etc.); tests of hypotheses of failure rates; prediction of component reliability; system reliability prediction; and reliability apportionment. Prerequisite: STA 3322.

**STA 5800 Stochastic Processes for Engineers (3).** Probability and conditional probability distributions of a random variable, bivariate probability distributions, multiple random variables, stationary processes, Poisson and normal processes. Prerequisites: STA 3033, MAC 3313, MAP 3302.

**STA 5826 Stochastic Processes (3).** This course is intended to provide the student with the basic concepts of stochastic processes, and the use of such techniques in the analysis of systems. Subjects include: Markov Processes, queueing theory, renewal processes, birth and death processes, Poisson and Normal processes. Applications to system reliability analysis, behavioral science, and natural sciences will be stressed. Prerequisite: STA 5447.

**STA 5906 Independent Study (VAR).** Individual conferences, assigned reading, and reports on independent investigation.

**STA 6166/STA 6167 Statistical Methods in Research I and II (3-3).** For non-mathematical sciences graduate students. A non-calculus exposition of methods and applications of statistical techniques for the analysis of data. Statistical packages will be used. Prerequisite: Graduate standing.

**STA 6246 Data Analysis I (3).** Exploratory data analysis; testing of distributional assumptions; Chi-square tests, tests for means, variances, and proportions. Prerequisites: STA 3033, STA 3322, or STA 6327.

**STA 6247 Data Analysis II (3).** Analysis of variance, regression analysis. Analysis of covariance, quality control, correlation, empirical distributions. Prerequisites: STA 6246 and MAS 3105.

**STA 6326 Mathematical Statistics I (3).** An introduction to the theories underlying statistical analysis. Basic concepts of probability theory, combinatorial analysis, random variables, and expectation. Prerequisite: MAC 3313.

**STA 6327 Mathematical Statistics II (3).** Estimation of parameters, tests of hypotheses, regression, non-parametric methods, analysis of

variance, and multivariate concepts. Prerequisite: STA 6326.

**STA 6807 Queueing and Statistical Models (3).** Review of probability concepts, basic probability distributions, Poisson process, queueing models, statistical models. Prerequisites: Permission of Instructor, MAC 3312 and either STA 3033 or STA 3321.

**STA 6940 Supervised Statistical Consulting (3).** Formulation of statistical problems from client information, consulting session management, interpersonal aspects of consulting, problem solving techniques. Prerequisites: Permission of instructor, STA 4102, STA 6247, and STA 6327.

**STA 7707 Multivariate Methods I (3).** Multivariate normal, Wishart and Hotelling's distributions. Inferences for one and two mean vectors. Profile analysis. One- and two-way MANOVA. Multivariate multiple regression. Prerequisite: STA 3123 or STA 3112.

**STA 7708 Multivariate Methods II (3).** Principal components analysis. Factor analysis. Canonical correlation analysis. Discriminant analysis. Cluster analysis. Multidimensional scaling. Prerequisite: STA 7707.

## Visual Arts

**William Maguire, Professor and Chairperson**

**Ralph F. Buckley, Associate Professor**

**William Burke, Associate Professor**

**James M. Couper III, Professor**

**Carol Damian, Assistant Professor**

**Eduardo Del Valle, Associate Professor**

**Richard Duncan, Associate Professor**

**Mirta Gomez, Associate Professor**

**Ellen Jacobs, Professor**

**Juan Martinez, Assistant Professor**

**Dahla Morgan, Lecturer/Art Museum Director**

**Manuel Torres, Associate Professor**

**Barbara Watts, Assistant Professor**

**Sandra Winters, Associate Professor**

The Department of Visual Arts does not presently offer a degree program at the graduate level but does, however, offer graduate courses. These courses are offered to supplement other graduate degree programs at the University.

## Course Descriptions

### Definition of Prefixes

ARR-Art History; ART-Art; PGY-Photography.

**ARR 5907 Directed Studies (1-6).** A group of students, with the approval of the art faculty, may select a master teacher of theory, research or criticism in selected areas as film, painting, sculpture, architecture, crafts, art history, multi-media art, etc. Arrangements must be made at least a semester before course is offered. May be repeated.

**ARR 5913 Research (1-6).** Art history, criticism, and theory in areas not covered by the present program and which the student wishes to study. Prerequisite: Permission of instructor. May be repeated.

**ART 5125C Ceramics (3).** The advanced student will explore all aspects of expression in clay and glaze. Students will be expected to be mostly self-directed. Prerequisite: ART 3111C, or permission of the instructor. May be repeated.

**ART 5159C Jewelry and Metals (3).** A study of basic metal techniques and strengthening of three-dimensional design concepts for the beginner. The advanced student will explore the more difficult technical aspects of areas such as hollow ware, enameling, casting, and stone setting. May be repeated.

**ART 5165C Glassblowing (3).** A basic course in off-hand glass blowing, concerned with preparing, forming, and finishing glass; understanding of glass as an art form; operation and maintenance of a glass studio. May be repeated.

**ART 5340C Drawing (3).** Drawing will be considered as an essential part of every art student's curriculum. Depending on his lower level work, a student will be encouraged to take at least one drawing course at the University. Off-campus studio work may be arranged. May be repeated.

**ART 5341C Figure Drawing (3).** Drawing from the model during assigned studio time. Open to all students. May be repeated. Prerequisite: ART 3310.

**ART 5403C Printmaking (3).** With a knowledge of basic intaglio and relief printing, the student will explore specific media such as etching, lithography, silk-screen and other experimental techniques. May be repeated.



**ART 5580C Painting (3).** An advanced course concentrating on conceptual clarity and the realization of stylistic development. Group, individual criticism will be emphasized. May be repeated. Prerequisites: ART 3510C or equivalent. Suggested prerequisites: ART 3831C and ART 3803C. May be repeated.

**ART 5710C Figure Sculpture (3).** To develop skills in representational structure and anatomy from the model and learn mold-making techniques. May be repeated.

**ART 5730C Sculpture (3).** With a background in beginning sculpture, the student will develop standards of excellence, both in concept and technique, with stress on individual expression. An equipped shop will be available to the student. May be repeated.

**ART 5907C Directed Study (VAR).** A group of students, with the approval of the Visual Arts Department faculty, may select a master artist teacher and pursue a course of art study in selected areas such as graphic design, film, multi-media, environmental design, sound, etc. Arrangements must be made at least one semester before course is offered. May be repeated.

**ART 5910C Research (1-6).** Students may study or research an individual art project with an art faculty member. Complexity and amount of work will determine the number of credit hours granted. May be repeated.

**PGY 5425C Photography (3).** An advanced course for majors and accomplished non-majors. Includes demanding critique of student's work. May be repeated. Prerequisite: PGY 3410C or permission of instructor.

## College of Arts and Sciences

Dean (Acting), Arthur W. Herriott  
Associate Dean, Curriculum and Advisement Fred Bouma  
Associate Dean, Budget and Development Samuel Shapiro  
Associate Dean, North Miami, Joyce Peterson  
Director, School of Computer Science Jaiendra Navlakha

### Chairpersons and Program

#### Directors:

Biological Sciences	Jennifer Richards
Chemistry	Leonard Keller
Economics	Raul Moncarz
English	Asher Milbauer
Environmental Studies	John Parker
Geology	Grenville Draper
History	Mark Suchman
Humanities	Ramon Mendoza
International Relations	Ralph Clem
International Studies	Damian Fernandez
Liberal Studies	Janet Parker
Mathematics	Dev Roy
Modern Languages	Reinaldo Sanchez
Music	John Augenblick
Philosophy and Religious Studies	Bruce Hauptli
Physics	Richard Gott
Political Science	Joel Gottleb
Psychology	Scott Fraser
Sociology and Anthropology	Gullermo Grenier
Statistics	Carlos W. Brain
Theatre and Dance	Marlyn Skow
Visual Arts	William Maguire

### Faculty

**Aladro, Gerardo, Ph.D.** (Pennsylvania State University), Associate Professor, Mathematics  
**Antrim, Harry, Ph.D.** (University of Florida), Professor, English  
**Aragon, Irmenia, M.A.** (Temple University), Instructor, Modern Languages  
**Arell, Farahangiz, Ph.D.** (University of Central Florida), Assistant Professor, School of Computer Science  
**Arnold, St. George Tucker, Jr., Ph.D.** (Stanford University), Associate Professor, English  
**Arvin-Rad, Hassan, Ph.D.** (University of Pennsylvania), Assistant Professor, Economics  
**Augenblick, John, D.M.A.** (University of Miami), Associate Professor and Chairperson, Music

**Bahrck, Lorraine, Ph.D.** (Cornell University), Associate Professor, Psychology  
**Baldor, Aurelio, M.A.** (Florida International University), Instructor, Modern Languages  
**Bailey, Patrice, M.A.** (Indiana State), Instructor, Theatre and Dance  
**Barrett, Lynn, M.F.A.** (University of North Carolina-Greensboro), Associate Professor, English  
**Barton, David, Ph.D.** (University of Cambridge), Professor, School of Computer Science  
**Beer, Michelle, Ph.D.** (University of Pittsburgh), Associate Professor, Philosophy and Religious Studies  
**Bennett, Bradley C., Ph.D.** (University of North Carolina-Chapel Hill), Assistant Professor, Biological Sciences  
**Berk, Lynn, Ph.D.** (Purdue University), Associate Professor, English  
**Berk, Toby, Ph.D.** (Purdue University), Professor, and Associate Director, School of Computer Science  
**Bigger, Charles, Ph.D.** (Florida State University), Associate Professor, Biological Sciences  
**Blum, Milton, Ph.D.** (New York University), Professor Emeritus, Psychology  
**Bone, Richard, Ph.D.** (University of West Indies, Jamaica), Associate Professor and Chairperson, Physics  
**Boodhoo, Ken, Ph.D.** (University of the West Indies, Jamaica), Associate Professor, International Relations  
**Brain, Carlos W., Ph.D.** (West Virginia University), Associate Professor, and Chairperson, Statistics  
**Breslin, Thomas A., Ph.D.** (University of Virginia), Associate Professor, International Relations, and Vice Provost  
**Brick, John, Ph.D.** (University of Miami), Assistant Professor, Music  
**Brooke, Lee, B.S.** (The Juilliard School), Assistant Professor, Theatre and Dance  
**Brown, Jerry, Ph.D.** (Cornell University), Associate Professor, Sociology/Anthropology  
**Buckley, Ralph, M.F.A.** (Maryland Institute), Associate Professor, Visual Arts  
**Burke, William, M.F.A.** (State University of New York at New Paltz), Associate Professor, Visual Arts  
**Calbeck, William, Ph.D.** (University of Wisconsin-Madison), Assistant Professor, Mathematics  
**Carvajal, Manuel, Ph.D.** (University of Florida), Professor, Economics

- Carrington, Jane, B.F.A.** (*The Julliard School*), Assistant Professor, Theatre and Dance
- Casines, Gisela, Ph.D.** (*University of Florida*), Associate Professor, English
- Castellanos, Isabel, Ph.D.** (*Georgetown University*), Associate Professor, Modern Languages
- Chen, Chun-Fan, Ph.D.** (*University of Michigan*), Associate Professor, Biological Sciences
- Chen, Ling, Ph.D.** (*American University*), Assistant Professor, Statistics
- Chernela, Janet, Ph.D.** (*Columbia University*), Associate Professor, Sociology/Anthropology
- Chung, Bongkil, Ph.D.** (*Michigan State University*), Associate Professor, Philosophy and Religious Studies
- Church, Phillip, M.F.A.** (*University of California at Irvine*), Associate Professor, Theatre and Dance
- Cifone, Rocco, M.A.** (*San Diego State University*), Instructor, Theatre and Dance
- Clark, John, M.A.** (*University of Virginia*), Instructor, International Relations
- Clem, Ralph, Ph.D.** (*Columbia University*), Professor, and Chairperson, International Relations
- Clement, Bradford, Ph.D.** (*Columbia University*), Assistant Professor, Geology
- Cohen, Daniel, Ph.D.** (*Brandeis University*), Assistant Professor, History
- Comfort, John C., Ph.D.** (*Case Western Reserve University*), Professor, School of Computer Science
- Connor, Charles, Ph.D.** (*Dartmouth College*), Assistant Professor, Geology
- Copper, Mark L., Ph.D.** (*University of Georgia*), Assistant Professor, Mathematics
- Correll, Helen, Ph.D.** (*Duke University*), Research Scientist, Biological Sciences
- Cortina, Rodolfo, Ph.D.** (*Case Western Reserve University*), Professor, Modern Languages
- Couper, James, M.A.** (*Florida State University*), Professor, Visual Arts
- Cova, Luis, Ph.D.** (*Princeton University*), Assistant Professor, School of Computer Science
- Cox, Ronald W., Ph.D.** (*University of Wisconsin*), Assistant Professor, Political Science
- Craumer, Peter, Ph.D.** (*Columbia University*), Assistant Professor, International Relations
- Crosby, James, Ph.D.** (*Yale University*), Professor, Modern Languages
- Cuervo, Leon, Ph.D.** (*University of Maryland*), Professor, Biological Sciences
- Cutler, Brian, Ph.D.** (*University of Wisconsin-Madison*), Associate Professor, Psychology
- Dalrymple, George, Ph.D.** (*University of Toronto*), Associate Professor, Biological Sciences
- Damian, Carol Ph.D.** (*University of Miami*), Assistant Professor, Visual Arts
- Darici, Yesim, Ph.D.** (*University of Missouri*), Assistant Professor, Physics
- Daruwala, Maneck, Ph.D.** (*University of Rochester*), Associate Professor, English
- de Alonso, Irma, Ph.D.** (*University of York, England*), Associate Professor, Economics
- de Jongh, Elena, Ph.D.** (*Tulane University*), Assistant Professor, Modern Languages
- de la Cuesta, Leonel A., Ph.D.** (*The Johns Hopkins University*), Associate Professor, Modern Languages
- del Valle, Eduardo, M.F.A.** (*Brooklyn College, City University of New York*), Associate Professor, Visual Arts
- Delgado, Milagros, Ph.D.** (*University of Miami*), Assistant Professor, Chemistry
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## College of Business Administration

The College of Business Administration (CBA) offers academic programs leading to the graduate degrees of Master of Accounting (M.Acc.), Master of Business Administration (M.B.A.), Master of International Business (M.I.B.), Master of Science in Finance (M.S.F.), Master of Science in Information Systems (M.S. in MIS), Master of Science in Taxation (M.S.T.), and Doctor of Philosophy in Business Administration (Ph.D.).

The College is organized into the School of Accounting and Departments of Decision Sciences and Information Systems, Finance, Management and International Business, and Marketing and Business Environment.

**Note:** The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements and regulations.

### Master's Degree Programs

All students taking graduate business courses must be admitted to a business graduate program or have prior approval from the appropriate graduate counselor.

The graduate programs of the College offer the student advanced professional education for managerial careers in business and government. At the Master's level, the degrees of Master of Accounting, Master of Business Administration, Master of International Business, Master of Science in Finance, Master of Science in Management Information Systems, and Master of Science in Taxation are offered.

The Master of Business Administration degree is designed to give students a general management education and to assist them in preparing for their chosen careers. More specialized preparation is available in the other programs.

#### Admission Requirements

To be eligible for admission to the graduate programs in the College, the applicant must:

1. Satisfactorily meet the general University requirements for admission to graduate programs.
2. Hold a Bachelor's degree from a regionally accredited college or university.
3. Show high promise of success in graduate studies as determined by the faculty. Admission to all the College graduate programs will be based upon a combination of the Graduate Management Admission Test (GMAT) and the upper-division grade point average.
4. A foreign student must obtain a minimum score of 500 on the TOEFL, or an equivalent score on a comparable examination. See General Admission requirements for Foreign Students (undergraduate and graduate) in the Admission section of the catalog.
5. Be in good standing with previous colleges or universities attended.

#### Application Procedures

A student planning to enroll in graduate studies in the College must complete the following steps and meet the stipulated requirements:

1. Submit a Graduate Application for admission to the Admissions Office. Application Forms will be mailed upon request. The admission process may require as long as two months after receipt of the application, depending upon the time involved in the receipt of transcripts and test scores.
2. Have a copy of the official transcripts of all previously earned college or university credits sent from the applicant's former institution(s) to the Admissions Office. (Copies submitted directly by applicants are not accepted for application purposes).
3. Submit scores on the Graduate Management Admissions Test (GMAT), administered nationally by the Educational Testing Service (Box 966, Princeton, New Jersey 08540). Registration forms will be mailed upon request.

#### Degree Requirements

To be eligible for a Master's degree, a student must:

1. Satisfy all University requirements for a master's degree.
2. Meet the requirements of an approved program of study. This program of study is developed by the student and his or her graduate counselor and must be approved by the appropriate Department Chairperson.
3. (a) Complete a minimum of 36 semester hours (depending on program) of graduate level coursework, for the Master of Science in Finance and Master of Science in Management Information Systems

(b) Complete a minimum 40 semester hours of graduate level coursework, for the Master of Business Administration or 39 semester hours for the Master of International Business.

(c) Complete a minimum of 30 semester hours of graduate level coursework for the Master of Accounting or the Master of Science in Taxation programs.

4. Earn a minimum average of 'B' (3.0) in all approved courses in the student's program of study.

No courses in which a grade below 'C' is earned may be counted toward the M.Acc., MBA, MIB, MSF, M.S. in MIS, or MST degrees. However, all approved work taken as a graduate student will be counted in computing the grade point average, including courses graded 'D' or 'F', and any approved undergraduate courses taken while a graduate student.

#### Transfer Credit

Students may receive permission to transfer up to a maximum of six semester hours of graduate credit toward their degree program, provided that: (1) the courses were taken at the graduate level at an accredited college or university; (2) the courses were not introductory or 'survey' in nature; (3) grades of 'B' or higher were earned; (4) the courses are judged by the faculty advisor, the Department Chairperson, and the Dean to be relevant to the student's graduate program; (5) the credits were not used toward another degree; and (6) the credits were completed within six years immediately preceding the awarding of the degree. Credits are not transferable until the student has earned 15 semester hours in the CBA graduate program. Students wishing to transfer to the CBA must be in good standing at their previous school or college.

#### Time Limit

All work applicable to the Master's degree, including transfer credit, must be completed within six years immediately preceding the awarding of the degree.

#### Change of Major

The graduate student who wishes to change his or her program major must submit a Graduate Change of Major request to the Admissions Office and meet the admission and program requirements in effect at the time of the change of major.

## Master of Business Administration (MBA)

The objective of the MBA program is to develop a management generalist who has a breadth of knowledge and understanding of business and who is oriented toward pragmatic problem-solving. The courses leading to the MBA degree are designed to provide experience in the techniques and concepts of business administration.

The MBA program has two tracks:

1. A track of 40 hours for students who have an undergraduate degree in business from an AACSB accredited school awarded five years or less prior to acceptance in this program. This track consists of 28 hours of non-waivable core courses and 12 hours of approved electives which may be taken towards a concentration in one subject area. (Note: students are required to take GEB 6445, Legal Environment of Business, in addition to the four electives, if an upper-division legal environment of business course was not completed within five years prior to admission.)

2. A track of up to 61 hours for students who have a) a business undergraduate degree awarded more than five years prior to acceptance into this program, b) a business undergraduate degree from a school not accredited by the AACSB, or c) a non-business undergraduate degree. This track consists of 21 hours of waivable pre-core courses, 28 hours of non-waivable core courses, and 12 hours of approved electives which may be taken towards a concentration in one subject area.

### Seven Pre-Core Courses (21)

ACG 6026	Accounting for Managers
ECP 6705	Managerial Economics I
ECP 6715	Macroeconomic Forecasting for Management
GEB 6445	Legal Environment of Business
MAN 6569	Managerial Decision-Making
MAR 6805	Marketing Management
QMB 6603	Quantitative Methods in Management

### Nine Core Courses (28)

ACG 6175	Financial Reporting and Analysis
FIN 6428	Financial Management
FIN 6456	Quantitative Methods in Financial Analysis
MAN 6204	Organization and Management Theory
MAN 6245	Organizational Behavior
MAN 6501	Operations Management

MAN 6830	Organization Information Systems
MAN 6830L	Organization Information Systems Lab
MAN 6726	Policy Analysis
MAR 6816	Advanced Marketing Management

### Four Elective Courses (12)

Completion of four approved 6000-level courses offered by two or more CBA units leads to an MBA in General Business. Areas of concentration are also available by completing up to three of the four 6000-level elective courses offered by the following CBA units. One of the electives is required to be taken in the International Area.

CBA Unit	Concentration
Accounting	Accounting, Taxation
Decision Sciences and Information Systems	Management Information Systems, Operations Management
Finance	Finance
Management and International Business	Organizational Behavior, Human Resources Management, International Business
Marketing and Business Environment	Marketing

Each area of concentration is subject to approval by the department offering courses in that area. Some areas of concentration may require completion of one or two additional courses beyond the MBA requirements.

## Doctoral Degree Programs

The doctoral program in Business Administration is a selective one leading to the Ph.D. degree.

The program emphasizes the development of research and teaching skills to ensure that graduates acquire the credentials necessary for placement in leading academic institutions.

Each doctoral student's program of study is tailored to mesh faculty and student interests and to maintain a high level of interaction among the students and the faculty.

The program requires three to four years of full-time study, including a year to a year-and-a-half of dissertation research. Core business courses are required of all doctoral candidates

during the first year of study; the second year consists of courses in a major area of concentration. The first year is geared toward breadth of knowledge, whereas the second year develops students' depth of knowledge in a particular area of concentration.

### Major Areas of Concentration

Accounting  
Decision Sciences and Information Systems  
Finance  
International Business  
Management  
Marketing

### Admission Requirements

Applicants are considered from students with a wide variety of educational backgrounds, such as business, liberal arts and the sciences. Those who are accepted into the program show strong evidence of ability and scholarly interests.

Potential students should provide the following:

1. Completed application form and processing fee.
2. Three letters of recommendation from academic sources.
3. Official transcripts from all undergraduate and graduate coursework.
4. A report of the Graduate Management Admissions Test (GMAT) score from the Educational Testing Service (the average GMAT score for entering students is above 600).
5. A formal statement of purpose for seeking the doctoral degree.

6. International students whose native language is other than English must also submit an official report of their score on the Test of English as a Foreign Language (TOEFL) from the Educational Testing Service. A minimum score of 500 is required. See the General Admission Requirements for Foreign Students (undergraduate and graduate) in the Admission section of the catalog.

Admission to the program is considered as soon as all the required documents are received. The Doctoral Program in Business Administration at the University encourages all qualified persons to apply and admits applicants without regard to sex, age, race, color, creed, handicap, marital status, national or ethnic origin.

### Degree Requirements

General degree requirements for all doctoral candidates are:

1. Demonstration of practical knowledge of research methods and



procedures in the areas of statistics, economics, and behavioral sciences; a research project is conducted at the end of the first year of study to ensure that all candidates have acquired the relevant skills.

2. Successful completion of a comprehensive examination at the end of the second year in a major area of concentration to ensure that students are prepared to begin dissertation research.

3. Successful completion and oral defense of doctoral dissertation.

### Financial Aid

Applicants to the doctoral program may request financial aid by completing the form included with the application. Research and teaching stipends are available. The stipend may include both cash award and waiver of tuition, depending upon the applicant's qualifications.

## School of Accounting

**James H. Schelner, Professor and Director**

**Lucia S. Chang, Professor and Associate Director**

**Rolf Auster, Professor**

**Delano H. Barry, Assistant Professor**

**William L. Campfield, Professor Emeritus**

**Jack L. Carter, Assistant Professor**

**Yong S. Choe, Assistant Professor**

**Lewis F. Davidson, Professor**

**Manuel Dieguez, Lecturer**

**Mortimer Dittenhoffer, Professor**

**Donald W. Fair, Instructor and Associate Dean**

**Georgina Garcia, Lecturer**

**Min H. Guo, Assistant Professor**

**Rosalia C. Hallbauer, Associate Professor**

**Harvey S. Hendrickson, Professor**

**Kevin Kemerer, Assistant Professor**

**David Lavin, Associate Professor**

**Myron S. Lubell, Associate Professor**

**Kenneth S. Most, Professor**

**Leandro S. Nunez, Lecturer**

**Robert B. Oliva, Associate Professor**

**Felix Pomeranz, Distinguished Lecturer, and Director, Center for Accounting, Auditing, and Tax Studies**

**Leonardo Rodriguez, Professor and Vice President, Business and Finance**

**Bernadette Ruf, Assistant Professor**

**Robert W. Rutledge, Assistant Professor**

**Paul J. Schlacter, Assistant Professor**

**John T. Sennett, Professor**

**Barbara T. Ulls, Assistant Professor**

**Richard H. Wiskeman, Jr., Lecturer**

**John Wrieden, Lecturer**

**Harold E. Wyman, Professor and Dean**

**Doria Yeaman, Associate Professor**

**Shu Yeh, Assistant Professor**

The School of Accounting offers two graduate degree programs, Master of Accounting and Master of Science in Taxation. The two programs are designed for students who have completed an undergraduate degree in accounting, or the equivalent, from a regionally accredited college or university. Equivalency of undergraduate degrees will be determined by the Director of the School of Accounting. Students whose degrees are in majors other than accounting will be required to complete business or accounting deficiencies, or both. Before a student with deficiencies may take courses in either program, the Director of the School must approve the student's program of study.

A student with a degree in business who is admitted to the M.Acc. program may be required to complete up to six accounting pre-core courses (21 semester hours) from the following:

ACG 6105	Accelerated Financial Accounting I	4
ACG 6115	Accelerated Financial Accounting II	4
ACG 6655	Auditing and Accounting Systems	4
ACG 6345	Management Accounting and Control	3
BUL 6124	Survey of Business Law	3
TAX 6005	Income Tax	3

A student with a non-business degree who is admitted to the M.Acc. program will be required to complete, in addition to the pre-core courses listed above, the seven pre-core courses of the Master of Business Administration, with the exception of GEB 6445 (Legal Environment of Business), for which MAN 6726 (Policy Analysis) must be substituted.

### Graduate Student Advising and Preregistration

All students taking graduate accounting and tax courses must be fully admitted to a graduate accounting program or have written permission from the Director of the School of Accounting. Registration for all graduate accounting and tax courses must be made through the School of Accounting Graduate Advisor. All graduate students are preregistered during a two-week period

commencing three weeks prior to official university registration.

## Master of Accounting (M.Acc.)

The M.Acc. degree is designed to prepare students for entry and advancement in the accounting profession and to provide the additional formal education needed by persons already in accounting and other fields seeking either a career change or advancement, or both.

The M.Acc. degree is available in the concentrations of accounting/auditing, systems, government accounting, and corporate/management accounting, and a separate track of government accounting and auditing. These are designed to prepare the students for the careers described below:

### Concentration/

#### Track

#### Career

Financial Accounting/ Auditing Systems	Independent Accountant in the public accounting profession
	Accounting systems, consultant, auditor, or officer in a business corporation or public accounting.
Internal Auditing	Industry or Government internal auditor
Corporate Management/ Accounting	Internal accountant, auditor, or officer in a business corporation.

A student who wishes to sit for the CPA examination must select courses which satisfy the 30 hours of post-baccalaureate study required by the Florida Statute. Relevant portions of the Florida Statute are detailed below.

### M.Acc. Program Concentrations

The M.Acc. program with a concentration in financial accounting/auditing, systems, internal auditing, or corporate/management accounting consists of two parts requiring 30 hours: the accounting core (nine semester hours) and the elective (21 semester hours).

### Accounting Core Requirements

ACG 6135	Seminar in Financial Accounting Theory I
ACG 6657	The Environment of Accounting
ACG 6437	Advanced Accounting Systems

Courses in accounting are not transferable unless approved in advance by the Director of the School of Accounting.

The accounting elective requirements are seven courses (21 semester hours) selected from the following three groups of courses:

1. No more than two tax courses from these:

TAX 6105	Taxation of Corporations I
TAX 6205	Partnership Taxation
TAX 6065	Tax Research Practice and Procedure

2. If sitting for the CPA examination, three courses, which include any 6000-level auditing course and these:

BUL 6116	Business Law II
TAX 6015	Taxation of Corporations and Partnerships

3. Additional 6000-level courses approved by the Director of the School of Accounting with a minimum of four courses (12 semester hours) in a single concentration of financial accounting/auditing, systems, government accounting, or corporate/management accounting.

## Master of Science in Taxation

The M.S.T. program is designed to prepare students entry or advancement in the specialized area of taxation. Students may develop their own specializations. The final program of studies must be approved by Director of the School of Accounting.

The M.S.T. program consists of two parts requiring 30 hours of coursework: tax core (12 semester hours) and electives (18 semester hours).

### Tax Core Requirements

TAX 6065	Tax Research Practice and Procedure
TAX 6105	Taxation of Corporations I
TAX 6405	Estate and Gift Taxation
TAX 6875	Current Developments in Taxation

The elective requirements are six additional 6000-level courses approved by the Director of the School of Accounting three of which must be tax courses excluding TAX 6015, TAX 6005, and TAX 6935.

Students admitted to the M.S.T. program who wish to sit for the CPA examination and who are required to complete deficiencies in undergraduate accounting by completing the accounting pre-core courses, are not required to take TAX 6005 (Income Tax) as part of the accounting pre-core.

Florida State Board of Accountancy as meeting the requirements for the additional credit hours required for the CPA Examination. With a carefully planned program of study, a student who earns either a M.Acc. or a M.S.T., will be qualified to sit for the Certified Public Accountant Examination, and upon successful completion of the examination be certified in the State of Florida. There is no additional experience requirement.

counting Examination, and upon successful completion of the examination be certified in the State of Florida. There is no additional experience requirement.

## Decision Sciences and Information Systems

**Daniel Robey**, Professor and Chairperson

**Dinesh Batra**, Assistant Professor

**Joyce J. Elam**, Professor and James L. Knight Eminent Scholar

**Sushil K. Gupta**, Professor and Vice Provost

**Peeter J. Kirs**, Assistant Professor

**Christos P. Koulamas**, Assistant Professor

**Jerzy Kyparisis**, Professor

**Tomislav Mandakovic**, Professor

**Krishnamurthy Muralidhar**, Associate Professor

**Rajiv Sabherwal**, Assistant Professor

**Radhika Santhanam**, Assistant Professor

**Maung K. Sein**, Assistant Professor

**Larry A. Smith**, Associate Professor

**Steve H. Zankakis**, Professor

**Peter J. Zegan**, Lecturer

## Master of Science in Management Information Systems

The Master of Science in MIS program emphasizes advanced study in the analysis, design, implementation and overall management of information systems in organizations. This program is designed to prepare graduates for positions of advanced responsibility in both systems and user departments. The program is a natural extension of undergraduate study in business or computer science. Students with other backgrounds will normally require additional courses to satisfy the general College's requirements.

The M.S. in MIS program consists of courses in two areas:

**Prerequisites:** Seven courses (21)

CGS 3403	COBOL for Non-Computer Science Majors	3
COP 2210	Programming in PASCAL	3

MAN 3025	Organization and Management	3
ACG 6026	Accounting for Managers	3
MAR 6805	Marketing Management	3
QMB 6603	Quantitative Methods in Management	3
ECP 6705	Managerial Economics	3

All of the courses listed above can be waived if they, or their equivalents, have been taken previously. Students may substitute 'C' or a structured programming language (not FORTRAN or BASIC) for PASCAL.

**Required Courses:** 14 courses (40)

ISM 6106	Systems Analysis	3
MAN 6569	Managerial Decision Making	3
MAN 6726	Policy Analysis	3
ISM 6305	Information Systems Planning	3
ISM 6205	Data Structures and File Processing	3
ISM 6155	Information Systems Analysis and Design	3
ISM 6405	Decision Support Systems	3
ISM 6045	Current Economic and Social Implications of Information Systems	3
MAN 6911	Research in Systems Development	3
MAN 6501	Operations Management	3
FIN 6428	Financial Management	3
MAN 6830	Organization Information Systems	3
MAN 6830L	Organization Information Systems Lab	1
QMB 6845	Simulation of Management Systems	3

A minimum of 40 hours is required for graduation. This may be reduced to 30 hours for students with a graduate degree in Business Administration or related area. Graduation requirements include a minimum overall GPA of 3.0. Courses with a grade below a 'C' will not be accepted for graduate credit.

## Finance

**Arun Prakash**, *Professor and Chairperson*

**Gary Anderson**, *Assistant Professor*

**Joel Barber**, *Assistant Professor*

**Robert Bear**, *Professor and Director, Broward Programs*

**William R. Beaton**, *Professor*

**Gerald O. Bierweg**, *Professor, Ryder System*

**Chun-Hao Chang**, *Assistant Professor*

**Robert T. Dalgler**, *Associate Professor*

**Krishnan Dandapani**, *Associate Professor*

**Shahid Hamid**, *Assistant Professor*

**James Keys**, *Instructor*

**Simon Pak**, *Associate Professor*

**Ali M. Parhizgar**, *Professor and Director, MBA Program*

**Elena Pemas**, *Instructor*

**Emmanuel Roussakis**, *Professor*

**George B. Simmons**, *Distinguished Service Professor*

**Michael Sullivan**, *Assistant Professor*

**William Welch**, *Associate Professor*

**John S. Zdanowicz**, *Professor and Director, Center for Banking and Financial Institutions*

## Master of Science in Finance

This graduate program leading to the degree of Master of Science in Finance (MSF) is offered primarily for students with an undergraduate business degree who want to concentrate in Finance at the graduate level. The MSF program is designed to extend analytical skills and decision-making abilities in the solution of problems related to obtaining and utilizing funds. Graduates will also have a sound working knowledge of current developments and opportunities as they pertain to financial institutions, capital markets, and the corporate enterprise.

### Content and Structure

The program has a minimum of 36 semester hours (12 courses).

#### Group 1 - Common Body of Knowledge

All or some of the common body courses can be waived (without substitution) depending on the student's prior education. Students with a recent degree in Business Administration from a regionally accredited university should be able to waive most or all of the Common Body Courses. The areas covered under common body of knowledge are financial and cost accounting, legal environment in business, economics, financial management and policy,

operations management, managerial decision making, organizational information systems, marketing, and organizational theory. If a student is deficient in any of these areas, the student will be required to fulfill the requirement by taking the appropriate courses. As part of the common body for Finance majors, students will be required to take FIN 6428 (Financial Management); this requirement may, but not necessarily, be waived if the student has satisfactorily completed two undergraduate Corporate Finance courses.

#### Group 2 - Finance Core Courses

All MSF-Finance students are required to take the following courses:

FIN 6246 Financial Markets and Institutions

FIN 6456 Quantitative Methods in Financial Analysis

FIN 6516 Security Analysis

FIN 6636 International Finance

FIN 6804 Theory of Finance

Group 3 - Finance Electives

Nine hours of approved Finance electives, other than those mentioned in Group 1 and Group 2, must be completed.

#### Group 4 - Four Related Electives

Students will be required to select four 6000-level courses from concentrations in business, economics, computer science, and other related areas. Students will be permitted, but not required, to concentrate in one area. These electives must be chosen with prior approval of the MSF program advisor.

The 36 semester hours requirement may be reduced to 30 for students who possess an accredited Master's Degree in Business Administration (this would result in the reduction of two related electives). Up to two graduate courses may be transferred in from another accredited school, even if no advanced degree was obtained.

## Management and International Business

**Enzo Valenzi**, *Professor and Chairperson*

**Richard Ahlers**, *Instructor*

**Constance S. Bates**, *Associate Professor*

**Gary Dessler**, *Professor*

**Herman Dorsett**, *Associate Professor*

**Dana L. Farrow**, *Professor and Associate Dean*

**Earnest Friday**, *Assistant Professor*

**Ronald Gilbert**, *Associate Professor*

**Jerry Haar**, *Associate Professor*

**Richard M. Hodgetts**, *Professor*

**William T. Jerome**, *Distinguished University Professor*

**Willabeth Jordan**, *Instructor*

**K. Galen Kroeck**, *Associate Professor and Director, Doctoral Studies*

**Jan B. Luytjes**, *Professor*

**Phillip H. Mann**, *Lecturer*

**Karl O. Magnusen**, *Associate Professor*

**Modesto A. Maldique**, *Professor and University President*

**Sherry Moss**, *Assistant Professor*

**Eleanor Polster**, *Instructor*

**Antonio F. Pradas**, *Lecturer*

**Kannan Ramaswamy**, *Assistant Professor*

**William E. Renforth**, *Professor*

**Leonardo Rodriguez**, *Professor and Vice President, Business and Finance*

**Ronnie Silverblatt**, *Associate Professor*

**Christine Spector**, *Associate Professor*

**George Sutija**, *Associate Professor*

**William M. Taggart**, *Professor*

**Anlisa S. Thomas**, *Assistant Professor*

The Department offers a graduate degree, the Master of International Business, and the graduate level Certificate in International Business. (See Certificate Programs.) The Master in International Business is designed to prepare students who seek a career in some aspect of global business. The past few decades have seen a rapid expansion in the field of international trade and in investments and virtually no business entity today is exempt from worldwide competitive forces. This expansion has resulted in the development of interdependent economic systems with all the political ramifications of such interdependence. The business person of the future must not only have a keen awareness of domestic business practices, but foreign business strategies as well. Furthermore, there must be a global political awareness and sensitivity.

ity in order to develop viable corporate strategies.

The global character of the program is not only to be found in the curriculum, but within the multinational composition of the students enrolled in the program. Qualified foreign students are actively recruited and the program seeks the active participation of foreign as well as domestic corporations through lectures by executives of these corporations or internships.

The program is designed in such a manner as to accommodate undergraduate business majors as well as non-business majors. The latter will have to meet the pre-core requirements which focus on the basic functional aspects of business and the related skills that might be necessary. Undergraduate business majors who have not taken the equivalent of any of the pre-core courses also would have to meet these pre-core requirements.

#### Pre-Core Courses

MAN 6245	Organizational Behavior
ACG 6026	Accounting for Managers
MAR 6805	Marketing Management
QMB 6603	Quantitative Methods in Management
MAN 6830	Organization Information Systems
MAN 6830L	Organization Information Systems Lab
ECP 6705	Managerial Economics
MAN 6569	Managerial Decision-Making
FIN 6428	Financial Management
MAN 6608	International Business

#### Core Courses

ACG 6255	International Accounting
BUL 6850	International Commercial Law
FIN 6636	International Finance
MAN 6603	Problems in Comparative Management
MAN 6635	International Business Policy
MAN 6717	Corporate Negotiations
MAR 6158	International Marketing
MAN 6617	Managing Global Production and Technology

In addition to the core, MIB candidates are required to take five electives. Two of the electives must be in one functional area (either within or outside the College of Business Administration), while the others may be taken in other areas. All electives must be approved by the advisor.

Students may choose their five electives so as to have a concentration or

specialization within a particular area. For example, suggested course sequences for concentrations in International Banking or Management of Science, Technology, and Innovation are given below:

#### International Banking Concentration

FIN 6315	Commercial Banking
FIN 6325	Current Issues in Commercial Banking
FIN 6346	Credit Analysis
FIN 6625	International Bank Management
FIN 6626	International Bank Lending Policies and Practices

#### Management of Science, Technology, and Innovation concentration:

MAN 6679	Master's Project in International Business
MAN 6805	Entrepreneurship
ISM 6045	Current Economic and Social Implications of Information Systems
ISM 6305	Information Systems Planning
MAN 6675	Special Topics in International Business

Other concentrations (e.g., in area studies) may be developed to meet a student's needs.

Suggested sequence of courses to be taken assuming full-time status:

#### Graduate with Non-Business Degree

	First Year	
Fall	Spring	Summer
ACG 6026	MAN 6245	FIN 6428
MAN 6608	MAR 6805	MAR 6158
ECP 6705	MAN 6569	Elective
MAN 6830	QMB 6603	
MAN 6830L		

	Second Year	
Fall	Spring	Summer
ACG 6255	MAN 6617	Elective
FIN 6636	MAN 6717	Elective
BUL 6850	MAN 6635	Elective
MAN 6603	Elective	

#### Graduate with Business Degree

	First Year	
Fall	Spring	Summer
ACG 6255	MAN 6617	MAR 6158
MAN 6603	MAN 6717	Elective
FIN 6636	MAN 6635	Elective
	Elective	

	Second Year	
Fall	Spring	Summer
BUL 6850	Elective	Elective

The purpose of sequencing the courses is not only to assure having the ap-

propriate prerequisites for the program, but also to build a class consciousness which may lead to an esprit-de-corps that can be of great value at some future time.

#### Suggested Electives

FIN 6625	International Bank Management
FIN 6626	International Bank Lending Policies and Practices
MAN 6615	International Labor-Management Relations
MAN 6675	Special Topics in International Business
MAN 6606	International Business Environment
REE 6935	Seminar in International Real Estate
ECO 5709	The World Economy
MAN 6601	International Management
MAN 6679	Master's Project in International Business

## Certificate Programs

### Advanced Certificate in Accounting

The purpose of the certificate program is to provide a structured program of graduate level instruction for those who do not wish to enroll in a graduate degree program; who need to satisfy mandatory continuing professional education requirements of any state; and who need to satisfy post-baccalaureate course credits to qualify for the CPA in Florida or any other state requiring a fifth year of education to sit for the CPA examination.

#### Admission

To be admitted to the certificate program, a student must have graduated from an accredited university degree program in accounting, or be a graduate of any other business discipline, provided that the student's transcript shows a completion of at least nine semester hours in accounting courses beyond the principles level with grades of 'B' or higher. Each student's transcript will be evaluated by an advisor to ensure that all deficiencies are satisfied.

Students applying for admission to the certificate program must submit current transcripts from all colleges or universities attended.

The certificate program consists of ten courses selected from the list

below. However, students are allowed to attend classes in the program without completing the entire certificate program. None of these courses will be transferable for graduate credit in College of Business Administration degree programs.

#### Required Courses: (30)

ACG 5507	Issues and Problems in Accounting for Nonprofit Entities	3
ACG 5395	Seminar in Managerial Accounting	3
ACG 5675	Operational Auditing	3
ACG 5627	Systems Auditing	3
ACG 5846	Seminar in Accounting	3
ACG 5806	Seminar in Financial Accounting	3
ACG 5256	International Dimensions of Accounting and Auditing	3
ACG 5696	Statistical Methods in Accounting and Auditing	3
ACG 5137	Standards and Principles of Financial Accounting	3
ACG 5307	Advanced Managerial Accounting	3
ACG 5386	Controllorship	3
ACG 5905	Independent Study in Accounting and Auditing	3
ACG 5936	Special Topics in Accounting and Auditing	3
BUL 5810	Legal Environment of Business	3
BUL 5662	Accountant's Liability	3
BUL 5661	Law for Accountants	3
TAX 5406	Taxation of Estates and Trusts	3
TAX 5066	Taxation Research and Reporting	3
TAX 5106	Corporation Taxation	3
TAX 5506	International Dimensions of Taxation	3
TAX 5725	Tax Planning	3
TAX 5875	Seminar in Taxation	3
TAX 5904	Independent Study in Taxation	3
TAX 5936	Special Topics in Taxation	3

#### Banking Certificate

The CIB (Certificate in Banking) is designed for practicing bank managers and bank employees. The core program consists of four undergraduate or graduate Finance courses. Upon successful completion of the four course sequence, a Certificate signed by the Dean of the College of Business Administration will be awarded.

Participants in the CIB Program must meet certain admission requirements. In general, those intending to take undergraduate level courses must have an Associate of Arts Degree or its equivalent, and must meet the other lower division preparation requirements of the College. Participants planning to take graduate level courses must hold a Bachelor's degree, submit a satisfactory score on the Graduate Management Admissions Test, provide transcripts of all undergraduate work, and meet all admission requirements of the College's graduate programs.

#### Program requirements

FIN 6487	Financial Risk Management-Financial Engineering	3
FIN 6428	Financial Management	3
FIN 6426	Financial Management Policies	3
FIN 6246	Financial Markets and Institutions	3
FIN 6315	Commercial Banking	3
FIN 6346	Credit Analysis	3

Applicants who are interested in pursuing a Master's degree in Finance should take FIN 6426, FIN 6246, FIN 6315, and FIN 6346 rather than FIN 3414, FIN 4303, FIN 4324, and FIN 4345.

#### International Bank Management Certificate

The Certificate in International Bank Management (CIBM) is designed to train existing and future bankers in the areas of international banking policy, practice, and technique. Its interest is to provide an interface between the domestic and international side of banking for bank managers. This certificate is not open to finance majors.

Participants in the CIBM must meet the admission requirements listed for the Certificate in Banking Program.

#### Required Courses

FIN 6487	Financial Risk Management-Financial Engineering	3
FIN 6428	Financial Management	3
FIN 6426	Financial Management Policies	3
FIN 6315	Commercial Banking	3
FIN 6325	Current Issues in Commercial Banking	3

FIN 6346	Credit Analysis and Loan Evaluation	3
FIN 6636	International Finance	3
FIN 6625	International Bank Management	3

#### Certificate in International Business

A Certificate program is available to graduate students wishing to acquire an in-depth understanding of international business, but who find it unnecessary or inconvenient to enroll for a graduate degree program. Such students may already have the MBA degree, or an undergraduate business degree.

Students in the Certificate in International Business program must meet the general admission requirements for graduate study in the College of Business Administration, and satisfactorily complete an approved program of study consisting of four courses, as follows:

MAN 6608	International Business	3
MAN 6635	International Business Policy	3

and two graduate international business courses approved by the Chairperson of the Department of Management and International Business.

#### Certificate in Marketing

At the time of publication of this catalog, a proposal for a Certificate in Marketing is being processed. The program is designed for marketing executives in the areas of promotion, international marketing and/or strategic marketing management.

It is anticipated that admission to this 15 credit-hour program will require a bachelor degree, presentation of transcripts for previous academic work, GMAT score, and general qualification for graduate study in the College of Business Administration.

Those interested in the Marketing Certificate should contact the Department of Marketing and Business Environment for further information.

## Course Descriptions

### Definition of Prefixes:

**ACG**-Accounting; **BAN**-Banking; **BUL**-Business Law; **CIS**-Computer and Information Systems; **GEB**-General Business; **FIN**-Finance; **MAN**-Management; **MAR**-Marketing; **QMB**-Quantitative Methods in Business; **REE**-Real Estate; **RMI**-Risk Management and Insurance; **TAX**-Taxation.

### Departmental or School/College Designation:

**AC** - Course taught by School of Accounting

**BA** - Interdepartmental course taught by College of Business Administration

**DS** - Course taught by Department of Decision Sciences and Information Systems

**EC** - Course taught by Department of Economics, College of Arts and Sciences

**FI** - Course taught by Department of Finance.

**MA** - Course taught by Department of Management and International Business

**ME** - Course taught by Department of Marketing and Business Environment

**MS** - Course taught by Department of Mathematical Sciences, College of Arts and Sciences

**ACG 5137 Standards and Principles of Financial Accounting (AC) (3).** A survey of official pronouncements on accounting standards and principles. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5256 International Dimensions of Accounting and Auditing (AC) (3).** Review of and reasons for variations in accounting and auditing practices throughout the world; explore initiatives undertaken to promote transparency, harmonization, and standardization to facilitate understanding of financial statements prepared under various conventions. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5307 Advanced Managerial Accounting (AC) (3).** In depth study of determination and control of production costs; budgetary control; CVP analysis; and alternative methods of performance measurement and analysis. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5386 Controllershship (AC) (3).** Study of controllership function; role of controller in planning, accounting for,

and evaluating company performance; relationship with internal auditing. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5395 Seminar in Managerial Accounting (AC) (3).** An in-depth study of selected areas of managerial accounting. Prerequisite: ACG 4341 or equivalent and Permission of Accounting certificate program advisor.

**ACG 5507 Issues and Problems in Accounting for Non-Profit Entities (AC) (3).** Study and analysis of accounting, reporting, and control standards and practices of non-profit organization - including accounting for governments, hospitals, universities, churches, and others. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5516 The Environment of Government Accounting (AC) (3).** Basic public administration emphasizing governmental processes with which governmental accountants and auditors come into contact. Includes legislative and administrative activities and operating functions having high accounting and auditing involvement. Prerequisite: Admission to graduate program in School of Accounting or permission of School Director.

**ACG 5518 Historical and Comparative Government Accounting (AC) (3).** Research and reporting on subjects in the history of, or on comparative aspects of, government accounting. Prerequisite: Admission to the graduate program in the School of Accounting or permission of School Director.

**ACG 5519 Contemporary Issues in Government Accounting (AC) (3).** Research and reporting on current issues related to government accounting. Prerequisite: Admission to graduate program in School of Accounting or permission of School Director.

**ACG 5545 Analysis of Governmental Financial Reports (AC) (3).** Describes content of government financial reports and analytical methods employed by internal and external users; covers concepts of disclosure, budget/actual analysis, credit evaluations, operational evaluations, measures of fiscal capacity and signs of fiscal stress. Prerequisites: ACG 6515 and admission to graduate program in the School of Accounting or permission of School Director.

**ACG 5546 Governmental Planning and Budgetary Accounting with**

**Cases (AC) (3).** Budgeting in governments emphasizing formulation based on accounting and auditing input. Budget execution and analysis of deviations of actual from budgets; study of ZBB, PPBS, and MBO systems and their behavioral and accounting bases. Prerequisites: ACG 6505, ACG 6525 and admission to the graduate program in the School of Accounting or permission of the School Director.

**ACG 5596 Accounting for Specialized Governmental and Nonprofit Entities (AC) (3).** Survey course by guest lecturers covering detailed accounting concepts, procedures, and reporting for enterprise fund entities, educational entities, and unique types of internal service funds. Prerequisites: ACG 6505, and admission to the graduate program of the School of Accounting or permission of the School Director.

**ACG 5627 Systems Auditing (AC) (3).** Principles and procedures of auditing systems of information, including the function, approach, and techniques of systems auditing and the evaluation of systems controls. Emphasis on auditing computerized systems. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5675 Operational Auditing (AC) (3).** Examines operational auditing as a professional discipline for testing and evaluating totality of planning and operating controls; particular attention to development, selling and implementation of recommendations for operating improvement and cost containment. Prerequisite: Permission of Accounting certificate program advisor.

**ACG 5696 Seminar in Auditing (AC) (3).** An in-depth study of recent developments in auditing. Prerequisite: ACG 4651 or equivalent and permission of Accounting certificate program advisor.

**ACG 5806 Seminar in Financial Accounting (AC) (3).** An in-depth study of recent developments in financial accounting. Prerequisite: ACG 4111 and permission of Accounting certificate program advisor.

**ACG 5846 Statistical Methods in Accounting and Auditing (AC) (3).** Formulation, analysis and implementation on a microcomputer of mathematical models in financial and managerial accounting and auditing. Prerequisite: Permission of Accounting certificate advisor.

**ACG 5905 Independent Study in Accounting and Auditing (1-3).** In-

dividual conferences, supervised readings, and reports on personal investigations. Prerequisites: Written permission of instructor, accounting certificate program advisor, School Director, and Dean.

**ACG 5936 Special Topics In Accounting and Auditing (AC) (3).** For groups of students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Prerequisite: Written permission of instructor, accounting certificate program advisor, School Director, and Dean.

**ACG 6005 Financial Accounting Analysis (AC) (3).** Introduction to the theory and practice of financial accounting and reporting, with emphasis on understanding and determining income and financial position. (No credit will be given to students who have had undergraduate or graduate equivalents). Prerequisite: QMB 6603 or equivalent.

**ACG 6026 Accounting for Managers (AC) (3).** Presentation of the nature, techniques and uses of accounting from the perspective of people who manage businesses and investments in businesses. Covers both financial and management accounting. Not open to M.S.T. or M.Acc. students.

**ACG 6105 Accelerated Financial Accounting I (AC) (4).** Underlying concepts and ethical, regulatory and business environment of financial reporting; emphasis on measurement, analysis and interpretation of income, cash flows and financial position. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

**ACG 6115 Accelerated Financial Accounting II (AC) (4).** Underlying concepts and ethical, regulatory and business environment of financial reporting; emphasis on measurement, analysis and interpretation of financial position, accounting for partnerships, international corporations, and business combinations. Prerequisites: ACG 6105 and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

**ACG 6135 Seminar In Financial Accounting Theory I (AC) (3).** A study of the theoretical structure of accounting, with special attention to asset and income definition, recognition, and measurement; and an appraisal of

pronouncements of professional accounting organizations. Prerequisite: Baccalaureate in accounting or equivalent and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6145 Seminar In Financial Accounting Theory II (AC) (3).** A continuation of ACG 6135, with emphasis on the problems of accounting for price-level changes and other current issues. Prerequisite: ACG 6135 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6175 Financial Reporting and Analysis (AC) (3).** Comprehensive treatment of analysis of financial statements as aid for decision making; looks at current state of financial reporting practices and impact of published statements on economic systems. Prerequisite: ACG 6026 or equivalent. Not open to M.S.T. or M.Acc. students.

**ACG 6205 Financial Accounting III (AC) (3).** Underlying concepts and ethical, regulatory and business environment of financial reporting, with emphasis on accounting for partnerships, international corporations, and business combinations. Prerequisite: ACG 4111 with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6245 Accounting and Auditing Compliance Issues (AC) (3).** Corporate, government and public accounting compliance with response to institutional and political regulation; attention to compliance in specialized industries such as health care, transportation, financial institutions real estate and construction. Prerequisites: ACG 4111 or equivalent, ACG 4651 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6255 International Accounting (AC) (3).** Comparative analysis of accounting concepts and practices in different countries; international accounting standards; problems of accounting for multinational corporations, including transfers of funds and income measurements; the role of accounting in national economic development. Prerequisite: ACG 6026 or equivalent, and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6295 Financial Accounting IV (AC) (3).** The application of accounting principles in the production of informa-

tion for selected topics in financial statements with extensive examination and evaluation of FASB and international standards of accounting. Prerequisites: ACG 6205 and admission to a graduate program in the School of Accounting or the permission of the Director.

**ACG 6345 Management Accounting and Control (AC) (3).** Accounting concepts and techniques useful in evaluation, planning, organization and control of a business enterprise, with attention to methods of accounting for production activities; ethics in management accounting. Prerequisites: ACG 6115 and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

**ACG 6346 Seminar In Managerial Accounting I (AC) (3).** Analysis of transfer pricing; product pricing; incremental profit analysis; decision models; alternative performance measurement techniques; and other advanced topics. Prerequisite: ACG 4341 or ACG 6026, and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6356 Seminar In Managerial Accounting II (AC) (3).** A study of the controllership function in corporate organizations; an appraisal of the controller's role in planning, accounting for, and evaluating company performance; and relationship to internal audit function. Prerequisite: ACG 4341 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6385 Managerial Control and Controllership (AC) (3).** Control methods for management; control structure, planning and forecasting for budgets; the functions of controllership, including cash management, risk management, investments, tax administration and records management. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6405 Seminar In Accounting Information Systems I (AC) (3).** Accounting information systems security and control and legal and ethical compliance; control of computer failure and abuse and compliance with laws, regulations, and standards. Computer usage required. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6415 Seminar In Accounting Information Systems II (AC) (3).** Ac-

counting information systems for strategic use in the management of competitive enterprises; budgeting, performance measurement, and cost accounting for generating strategic information. Computer usage required. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6437 Advanced Accounting Systems (AC) (3).** Development and control of information systems for accounting, emphasis on new microcomputer technology, software engineering, methods of data processing and database management systems. Prerequisites: ACG 4401 or equivalent and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6445 Accounting Information Systems Analysis and Design (AC) (3).** Accounting applications of information systems analysis and design concepts, methods, and tools; requirements, design, control, and prototyping of accounting information systems. Computer usage required. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6455 Accounting Information Systems Technology, Control and Audit I (AC) (3).** Accounting applications, control, and audit of large computer systems; technology, control concepts and procedures, audit testing and documentation, and control and audit software. Computer usage required. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6456 Accounting Information Systems Technology, Control and Audit II (AC) (3).** Accounting applications, control, and audit of small computer systems; technology, control concepts and procedures, audit testing and documentation, and control and audit software. Computer usage required.

**ACG 6506 Governmental and Institutional Accounting (AC) (3).** Budgeting, accounting, and reporting standards and practices for government and other not-for-profit entities. Prerequisite: ACG 4111 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6515 Advanced Governmental Accounting (AC) (3).** Treats the developing concept of consolidated

financial statements for governments. Also covers advanced areas of accounting, e.g., concepts, investment accounting, grant accounting, and pension accounting. Prerequisites: ACG 6505, ACG 6584, admission to graduate program in School of Accounting or permission of the School Director.

**ACG 6517 Audit of Governmental Entities (AC) (3).** Covers methods of audits of governments by independent public accountants, coordination with internal audit staffs; describes audits of governments by internal auditors (audits of fidelity, efficiency and effectiveness); covers current single audit concept. Prerequisites: ACG 6505, admission to the graduate program in the School of Accounting, or permission of School Director.

**ACG 6625 EDP Auditing Concepts (AC) (3).** Understanding and application of concepts and procedures of auditing computer information systems; analysis, testing, and documentation of computer security and controls for management and financial statement reports. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6655 Auditing and Accounting Systems (AC) (4)** Standards and procedures of auditing, ethics and responsibilities of auditors, audit evidence, reporting, international standards; design and control of accounting information systems. Prerequisites: ACG 6115 with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with a undergraduate accounting-degrees.

**ACG 6657 The Environment of Accounting (AC) (3).** Economics and scope of accounting practice In context of self-regulated profession, public policy constraints, complex business structures and innovative transactions, and rapidly changing information technology with extensive reference to business periodicals and on-line databases. Prerequisites: ACG 6135 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6675 Studies in Auditing II (AC) (3).** This course examines auditing in depth as a professionalized discipline for reviewing testing, and evaluating the financial and the operational activities and controls of an economic entity. Focus will be directed to private

sector profit seeking entities as well as governmental and other nonprofit organizations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6676 Advanced Internal Auditing (AC) (3).** Special topics in internal auditing such as forensic auditing, management consulting, work with external auditors, ethics, multinational aspects, evaluation methods, quality control, new technologies and recent research. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6677 Applied Internal Auditing (AC) (3).** The expansion of the internal audit process into such areas as administrative and support functions; line functions such as research, sales, and production; and special areas such as compliance, budgeting and controls. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6696 Studies in Auditing I (AC) (3).** Professional and technical aspects of auditing practice; introduction to SEC; ethics and legal responsibilities; emergence of non-public practice; public expectations and professional reality; the impact of technology; international auditing; recent auditing developments. Prerequisite: ACG 4651 and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6835 Behavioral Accounting (AC) (3).** Study of the effect of the process and products of accounting and of the relation of changes in the process and products to individual and group behavior; consideration of ways in which accounting can aid individuals and organizations to attain their goals. Prerequisites: ACG 4111 and 4341 or equivalents, and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6845 Accounting and Quantitative Methods (AC) (3).** Study of statistical and management science techniques that are or may be utilized in financial and managerial accounting. Prerequisites: QMB 3150 and ACG 4401, or equivalents, and admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6875 Evolution of Accounting Thought (AC) (3).** The cultural origins of accounting and its traditional con-



troveries, from pre-historic time onward, and in an international context. Prerequisite: Admission to graduate program in School of Accounting or permission of School Director.

**ACG 6885 Accounting Research and Reporting (AC) (3).** Examine the projects relating to historical and current problems in public accounting practice, and preparation of appropriate reports in oral and written formats, under a variety of professional settings. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6905 Independent Study In Accounting (AC) (1-3).** Individual conferences; supervised readings; reports on personal investigations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 6935 Special Topics In Accounting (AC) (1-3).** Intensive study for groups of students of a particular topic or a limited number of topics not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**ACG 7157 Seminar: Theory and Contemporary Research In Financial Accounting (AC) (3).** An evaluative overview of the classical literature in financial accounting and the contemporary empirical research published in the leading scholarly journals. Examined are income determination theories, normative accounting principles, accounting information and stock prices, and principal-agent relationships. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7177 Seminar: Accounting Information and Security Prices (AC) (3).** An in-depth examination of accounting information and security prices within capital markets theory, including a thorough examination of the cross-sectional properties and time-series properties of accounting numbers and the importance of research findings and new developments in research methodology. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7436 Seminar: Information Value and Agency Research Accounting (AC) (3).** An in-depth examination of the research paradigm and the associated empirical research in accounting and auditing. Examined are the issues of information value, risk aversion, risk sharing contracts, as well as accountability from the standpoint of

monitoring contracts. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7695 Seminar: Contemporary Research In Management Accounting and Auditing (AC) (3).** A broad overview of classical and contemporary empirical research in managerial accounting and auditing including budget and performance review, decision making, information analysis, professional judgement, sampling problems, audit risk, etc. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7836 Seminar: Behavioral Research In Accounting-Individual Behavior (AC) (3).** An in-depth examination of the relationship of cognitive psychology, cognitive models of human judgement, decision theory and accounting information. Emphasis is placed upon the human processing of accounting information, the decision value of information, and the development of decision aids or heuristics. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7837 Seminar: Behavioral Research In Accounting-Human Groups and Systems (AC) (3).** The multifarious behavioral relationships of groups within the formal and informal organizational structure are examined with respect to performance measurement (efficiency and effectiveness), accountability, planning and control of the development of decision support systems. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7886 Seminar: Empirical Research Methodology and Paradigms In Accounting (AC) (3).** Study of research design, methods of data collection and analysis and problems of measurement in accounting research. Empirical research studies in accounting are integrated throughout to illustrate and analyze the structural problems of research design as well as the strengths and weaknesses of various acceptable paradigms. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7887 Research Forum and Workshop (AC) (1).** Regularly scheduled workshop at which visiting scholars as well as faculty and doctoral candidates present and evaluate research papers. Candidates are expected to participate in discussions, act as discussants and present their own research for critique. Sessions are held for structuring and brainstorming research projects in the formative stages

as well as for presenting completed efforts. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7888 Seminar: The Philosophy of Science, Theory Construction, and Verification In Accounting (AC) (3).** An examination of knowledge, theories, scientific explanation and prediction as related to the social sciences. Various theories of accounting are critically examined from the standpoint of theory construction and verification in the philosophy of science. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7889 Seminar: Positive Theory Research In Accounting (AC) (3).** Construction of theory to explain accounting and auditing practices in an environment of regulation using empirical research findings from a growing body of economic-based research in accounting and finance. Prerequisite: Permission of Doctoral advisor in Accounting.

**ACG 7896 Accounting Research Methods on Capital Markets. (AC) (3).** An advanced accounting graduate course in current time series methods used to analyze capitals and other time-related financial markets. This course is designed for Ph.D. students in accounting and business who already have advanced statistical and financial training, and serves as an introduction to other doctoral courses. Prerequisite: Permission of Ph.D. advisor.

**ACG 7938 Seminar: Special Topics In Accounting Research (AC) (3).** Topics vary according to instructor and student interest in problems and issues on the frontier issues of accounting. Prerequisite: Permission of Doctoral advisor in Accounting.

**BAN 5652 Savings and Loan Management (FI) (3).** Financial management of savings and loan associations and other mortgage lenders, supply and demand of mortgage funds; state and federal regulatory bodies' legal and institutional characteristics related to mortgage markets. Prerequisite: FIN 3403 or FIN 6428, or equivalent.

**BUL 5661 Law for Accountants (AC) (3).** A survey of select topics of direct interest to accounting students, including contracts, sales, agencies, partnerships, corporations. Prerequisite: Permission of Accounting certificate program advisor.

**BUL 5662 Accountant's Liability (AC) (3).** Overview of accountant ex-

posure to private and public sector liability suits, independent in auditor engagements, securities regulations and other state and federal laws of chief concern to accountants. Prerequisite: Permission of Accounting certificate program advisor.

**BUL 5105 Legal Environment of Business (AC) (3).** Studies the importance of law and legal institutions on commerce workings of administrative law; various aspects of employment legislation and other areas of legal environment of business. Prerequisite: Permission of accounting certificate program advisor.

**BUL 6124 Survey of Business Law (AC) (3).** Overview of substantive and procedural aspects of contract law, U.C.C., partnerships and corporations, accountant's liability, and other aspects of government regulation of business. Prerequisite: Admission to a graduate program in the School of Accounting, or permission of the School Director. Not open to those with undergraduate accounting degrees.

**BUL 6116 Business Law II (AC) (3).** Substantive issues and principles of law including agency, partnership and corporation law, commercial paper, antitrust, employment, administrative, environmental and computer law; ethical issues in business law.

**BUL 6631 International Commercial Law (AC) (3).** Analysis of legal problems facing the U.S. international and multinational businesses. Topics include the transnational research of economic regulation, international trade and investment, antitrust law, technology transfers, and securities law.

**BUL 6651 Special Topics in Business Law (AC) (1-6).** Intensive study for groups of students of a particular topic, or a limited number of topics, not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**BUL 6906 Independent Study in Business Law (AC) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**COP 7545 File and Database Management Systems (DS) (3).** Fundamentals of database concepts and methodologies, including data representation, data modeling, and file organ-

ization. Prerequisite: Graduate standing.

**ECP 6705 Managerial Economics (EC) (3).** Basic microeconomic concepts as they apply to decision making within the organization; supply and demand; market structure and market behavior in specific industries. Prerequisites: ECO 3021 and ECO 3011.

**ECP 6715 Macroeconomic Forecasting for Management (EC) (3).** Business macroeconomic concepts as they apply to decision making within the firm. Traditional models of income determination and forecasting analysis. Prerequisite: ECP 6705.

**FIN 5418 Working Capital Management (FI) (3).** Intermediate theories and techniques of cash, accounts receivable, inventory, and accounts payable management. Prerequisite: FIN 3414 or FIN 6456.

**FIN 5473 Small Business Finance (FI) (3).** The financial markets, financial instruments, and managerial policies and techniques available to potential and existing entrepreneurs and owner/managers. Emphasis will be upon analysis of areas of opportunity for small business; analysis of financing alternatives; and analysis of profitability. Prerequisite: FIN 3403 or FIN 6428, or equivalent.

**FIN 5495 Leasing and Mergers (FI) (3).** Discussion-oriented course; will provide an analytical foundation to corporate development, strategies, and resource allocation decisions. Merger activity and leasing decisions will be viewed as strategic decisions by the firm to enable them to achieve corporate objectives. Prerequisite: FIN 3414 or FIN 6456, or equivalent.

**FIN 6246 Financial Markets and Institutions (FI) (3).** Analysis of the characteristics and efficiency of the money markets and capital markets. Types of money market and capital market instruments, and the role of financial institutions in these markets. Prerequisite: FIN 6428

**FIN 6315 Commercial Banking (FI) (3).** The objectives, constraints, and policies applicable to the management of commercial banks. Emphasis will be given to asset and liability management, marketing of services and other banking functions. Prerequisite: FIN 6428.

**FIN 6316 Management of Non-Bank Financial Institutions (FI) (3).** The objectives, constraints, and policies applicable to the management of

non-bank financial institutions, savings and loans associations, credit unions, REITs, and insurance, investment and finance companies. Prerequisite: FIN 6428.

**FIN 6325 Current Issues in Commercial Banking (FI) (3).** Main policy issues in commercial banking and the role of regulatory authorities. Presentation includes bank mergers and holding companies; national bank branching; and the present structure and prospects of the financial sector. Prerequisite: FIN 6315 or equivalent.

**FIN 6346 Credit Analysis (FI) (3).** This course examines how the accounting framework is integrated with tools and techniques for the analysis and interpretation of financial statements. Evaluation of risk in domestic and foreign loans and the pricing of credit facilities. Prerequisite: FIN 6428.

**FIN 6426 Financial Management Policies (FI) (3).** The selection and management of current and permanent assets to achieve corporate objectives. The selection and management of alternative sources of funds to obtain the optimal capital structure. Prerequisite: FIN 6428 or equivalent.

**FIN 6428 Financial Management (FI) (3).** In-depth examination of asset, liability and capital structure management, with emphasis on capital budgeting techniques; risk evaluation; working capital management; and methods of short-term, intermediate and long-term financing. Prerequisite: ACG 6026 or equivalent.

**FIN 6436 Capital Budgeting and Long Term Resource Allocation (FI) (3).** The theory of capital allocation at the level of the firm, and empirical findings. Decision models and their application. The pattern of capital expenditure of industries and of the economy as a whole. Investment determinants. Prerequisite: FIN 6456 or equivalent.

**FIN 6446 Competitive Strategy (FI) (3).** Provision of tools for managerial decision-making in a variety of competitive environments including demand analysis, short- and long-run costs of production, demand for factors, market structure and competitive strategy. Prerequisite: FIN 6456.

**FIN 6455 Financial Modeling and Forecasting (FI) (3).** An introduction to Financial Modeling and Forecasting. Emphasis is on computer models and forecasting the financial variables. Prerequisite: Permission of Instructor and FIN 6456.

**FIN 6456 Quantitative Methods in Financial Analysis (FI) (3).** The applications of computer techniques to financial management of manufacturing firms and financial institutions. Prerequisite: FIN 6428 or equivalent.

**FIN 6487 Financial Risk Management - Financial Engineering (FI) (3).** A survey of financial instruments used for financial risk management, including forwards, futures, options and swaps. Emphasis is on identification of financial risks and designing optimal risk management program. Prerequisite: FIN 6456.

**FIN 6508 Financial Futures and Fixed Income Investments (FI) (3).** An examination of the structure, uses, and strategies associated with financial futures markets. Hedging, speculative activity, and other risk-return procedures are discussed. Prerequisite: FIN 6456 or equivalent.

**FIN 6516 Securities Analysis (FI) (3).** An analysis of contemporary securities markets and their operations. The determinants of the risk-reward structure of equity and debt securities. Prerequisite: FIN 6456 or equivalent.

**FIN 6525 Portfolio Management (FI) (3).** Financial theories will be applied to the construction of portfolios. Portfolio management techniques will be analyzed in regard to the goals of individuals, corporations, and various financial institutions. Prerequisite: FIN 6516 or equivalent.

**FIN 6625 International Bank Management (FI, MA) (3).** Management of the international banking function; setting goals and developing strategies, establishing an organizational structure and managing operations. International banking services. Foreign lending, risks, restraints, and portfolio considerations. International banking trends and implications for regulation.

**FIN 6626 International Bank Lending Policies and Practices (FI, MA) (3).** Organization of the lending function and examination of the basic types of international lending: trade financing, loans or placements to foreign banks, loans to governments and official institutions, and loans to businesses. Syndicated bank loans. Documentation and legal considerations in foreign lending. Assessing and managing risk in the international loan portfolio.

**FIN 6636 International Finance (FI, MA) (3).** A comparative study of the institutional characteristics and internal efficiency of developed and under-

developed capital markets. The relationships between world and capital markets and prospects for integration. The role of multilateral institutions, multinational corporations, states, and the structure of trade in the international short and long term capital flows. The development of financial centers. Prerequisite: FIN 6428 or equivalent.

**FIN 6716 Financial Management of Governmental Organizations (FI) (3).** The budgetary process of identifying, justifying, and allocating funds. The securing of funds in the market and the efficient allocation of funds.

**FIN 6804 The Theory of Finance (FI) (3).** The study of the development of the theory of finance and its implications for the financial decisions made by the manager of business firms. Topics include: utility theory; capital budgeting; portfolio theory; capital market equilibrium; multi-period valuation; and the cost of capital. Financial decision making is explored under both certainty and uncertainty and within the context of both perfect and imperfect markets. Prerequisite: FIN 6456 or equivalent.

**FIN 6906 Independent Study in Finance (FI) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor and Department Chairperson required.

**FIN 6915 Master's Project in Finance (FI) (1-6).** An individualized research project and report, which may include field experience with a firm or agency; library research; computer programming; or project development. The course should be taken during the last half of the student's graduate program. Consent of faculty tutor and Department Chairperson required.

**FIN 6936 Special Topics in Finance (FI) (1-3).** For groups of students who desire intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

**FIN 7507 Seminar in Futures Markets (FI) (3).** A comprehensive examination of the literature in futures markets. Emphasizes the structure and pricing of futures, and risk management via hedging and arbitrage. Prerequisite: Permission of instructor.

**FIN 7528 Seminar in Investments (FI) (3).** Examines analysis and measurement problems of investments. Includes the application of statistical

techniques, current theoretical issues and empirical literature. Prerequisite: Permission of instructor.

**FIN 7606 International Corporate Finance (FI) (3).** The study of topics of research interest to international financial decisions. Topics include foreign exchange risk, international financial markets, and foreign exchange market efficiency. Prerequisite: Permission of instructor.

**FIN 7807 Seminar in Corporate Finance (FI) (3).** Familiarizes students with recent developments in finance theory. Includes such topics as the influence of leverage, uncertainty and the cost of capital, agency theory and related topics. Prerequisite: Permission of instructor.

**FIN 7808 Financial Theory I (FI) (3).** This course focuses on the theory of financial decision-making under certainty and risk. Includes investment under uncertainty, capital structure, dividend, asset valuation, and options pricing. Prerequisite: Permission of instructor.

**FIN 7809 Financial Theory II (FI) (3).** This course focuses on the theory of financial decision-making under uncertainty and risk. Includes investment under uncertainty, capital structure, dividend, asset valuation, and options pricing. Prerequisite: Permission of instructor.

**FIN 7810 Financial Theory III (FI) (3).** This sequel to Financial Theory I and II focuses on microfinance. Discusses issues primarily in corporate finance such as effects of taxation, agency theory, and signalling theory. Prerequisite: Permission of instructor.

**FIN 7811 Seminar in Financial Markets and Institutions (FI) (3).** Examines recent developments in economic and financial theories as applied to topics such as the structure of financial markets and the economics of information and financial institutions. Prerequisite: Permission of instructor.

**FIN 7812 Seminar in Options and Contingent Claims (FI) (3).** An examination of the theories of option valuation and arbitrage pricing, and their applications to security analysis, portfolio management and financial instrument valuation. Prerequisite: Permission of instructor.

**FIN 7816 Seminar in Portfolio Theory (FI) (3).** Examines investment and portfolio theory, with emphasis on the historical development of the literature in this area and the recent analytical and empirical work. Prerequisite: Permission of instructor.

**FIN 7818 Foundations of Financial Models (FI) (3).** Introduction to mathematical and economic models underlying the development of modern finance theory. Includes discrete and continuous time models in finance using stochastic calculus. Prerequisite: Permission of instructor.

**FIN 7845 Statistical Methods in Finance I (FI) (3).** Estimation, and testing of various economic and financial models. Emphasis on econometric techniques to deal with various problems of single-equation models and introduction to simultaneous equation. Prerequisite: Instructor's permission.

**FIN 7846 Statistical Methods in Finance II (FI) (3).** Emphasis on econometric techniques and multivariate statistics as applied in finance. Includes simultaneous equation models, multiple discriminant analysis and factor analysis. Prerequisite: Instructor's permission.

**FIN 7855 Financial Economics I (FI) (3).** An advance doctoral course covering selected advanced topics in Microeconomic foundations and other topics related to business. Emphasis will be on economics of uncertainty, agency problems, information and signalling. Prerequisite: ECO 7115 or Permission of instructor.

**FIN 7856 Financial Economics II (FI) (3).** An advanced doctoral course covering selected advanced topics in the theory of macrofinance. Emphasis will be on financial intermediation. Prerequisite: ECO 7206 or Permission of instructor.

**GE 6445 The Legal Environment of Business (BA) (3).** A study of federal and state regulatory laws, encompassing aspects of the judicial process, legal/economic aspects of business organizations, international legal environment, and legal/political elements of business ethics.

**GE 7906 Independent Study for Doctoral Students (1-15).** Supervised research projects determined by professor and student. May involve conferences, supervised reading, and reports. Consent of sponsoring professor and chairperson required.

**GE 7916 Doctoral Research Project in Business (BA) (1-15).** Intensive research project conducted after the first tier of coursework is complete. Conducted on an individual basis under the supervision of a faculty member. Prerequisite: Graduate standing.

**GE 7936 Doctoral Seminar in Business Administration (BA) (1).** Weekly informal seminars to discuss current issues, educational approaches, and career management for Ph.D. students in Business Administration.

**GE 7980 Doctoral Dissertation in Business Administration (BA) (1-15).** Original research that is supervised by a faculty committee and defended openly before the university committee. Prerequisite: Admission to Candidacy.

**ISM 6045 Current Economic and Social Implications of Information Systems (DS) (3).** Effects and implications of socioeconomic factors in the operation of information systems and interdependence with the legal and international business environment. Privacy and fraud; computer system purchase and lease contracts; economics of system design, selection and operation; electronic fund transfers and mail; international considerations. Prerequisites: MAN 6830 and MAN 3025.

**ISM 6106 Systems Analysis (DS) (3).** A study of the systems approach to problem solving as it applies to any area of specialization. Consideration of the problems in determining system objectives; identifying system boundaries and constraints; marshalling resources for achieving system objectives; analyzing the sub-components of the system and their respective objectives; and managing the system. Prerequisites: MAN 6830, CGS 3403, and COP 2210.

**ISM 6155 Information Systems Analysis and Design (DS) (3).** Concepts and methods used in the analysis and design of MIS. Feasibility study, system flow charting, data requirements analysis, data design, user friendly systems design. Systems design project. Prerequisites: ISM 6205 and ISM 6106.

**ISM 6205 Data Structures and File Processing in Business (DS) (3).** This course deals with major levels of data organization, data base management, hierarchic and associative structures, file maintenance, and privacy and security measures and safeguards. Prerequisites: MAN 6830, CGS 3403, and COP 2210.

**ISM 6305 Information Systems Planning (DS) (3).** An in-depth study of systems concepts, as they apply to information systems in organizations. Consideration of planning for systems development and its accomplishment through the phases of the life cycle, and of the overall management of the

information systems function. Prerequisites: MAN 6830 and MAN 3025.

**ISM 6357 Computer Administration (DS) (3).** The theory and computer management. Topics include selection, training, job and performance evaluation, and incentive schemes as they relate to key positions of systems analysis, programming, data preparation and entry, and project management. Special attention is given to human resources management and development at various levels within the EDP department.

**ISM 6405 Decision Support Systems (DS) (3).** Concept of decision support is examined and types of applied decision support systems in business are surveyed. Prerequisites: MAN 6830, MAN 6569, ISM 6205, and ISM 6106.

**ISM 6455 Microcomputer Applications in Business (DS) (3).** Fundamentals and comparison of contemporary microcomputers. Extensive usage of available software for making business decisions. Emphasis on small business applications and cases. Student projects. Prerequisites: Computer programming proficiency, MAN 4504 and CGS 3300 or MAN 6501 and 6830.

**ISM 6930 Special Topics in Management Information Systems (DS) (1-6).** To study the recent developments in the MIS field not otherwise offered in the curriculum, such as office automation, computer graphics, etc. Prerequisites: Advanced standing and department chairman approval.

**ISM 7083 Deterministic Decision Models (DS) (3).** This course deals with the optimal decision making and modeling of deterministic systems that originate from real life. These applications, which occur in government, business, engineering, economics, and the natural and social sciences, are largely characterized by the need to allocate limited resources.

**ISM 7087 Probabilistic Decision Models (DS) (3).** This course deals with the optimal decision making and modeling of probabilistic systems that originate from real life. These applications, which occur in government, business, engineering, economics, and the natural and social sciences, are largely characterized by the need to allocate limited resources.

**ISM 7126 Systems Analysis and Design (DS) (3).** The process of analyzing information requirements and the design and implementation of

software systems. Emphasis on the theoretical foundations of different systems development techniques.

**ISM 7152 Seminar on System Implementation (DS) (3).** Theory and research on the implementation of information systems in organizational settings. Theories of technological innovation and political action applied in the design and development of systems within organizations.

**ISM 7306 Seminar on Managing Information Resources (DS) (3).** Theory and research on the managerial viewpoint on information processing functions within an organization. Relationship of information management to strategic planning and other business functions.

**ISM 7345 Organizational Impacts of Information Systems (DS) (3).** Analysis of theory and research on the impacts of information systems on human behavior in organizations and upon organizational design.

**ISM 7406 Decision Support Systems (DS) (3).** Theory and research on the design of decision aids. Integrating models and data with a technological delivery system that supports unstructured problem-solving by executive.

**MAN 5123 Human Interaction I: Personal Growth Laboratory (MA) (3).** Experience designed to increase awareness of personal social impact, and sensitivity to the feelings of others; to improve interpersonal communication, and increase understanding of the change-learning process. Study and analysis of class-group participation as well as other functional social groups.

**MAN 5524 Advanced Production Management (DS) (3).** More advanced methods in master planning, forecasting, capacity management, production activity scheduling/control, MRP and inventory management. This course has a professional orientation similar to the APICS certification guidelines. Prerequisite: MAN 4504 or MAN 6501, or Department Chairperson's approval.

**MAN 5930 Seminar in Personnel Management (MA) (3).** Overview and examination of the various aspects of the personnel management function.

**MAN 6051 Organization and Management Process (MA) (3).** Analysis of organizations including the evolution of management thought and the effects of technology and the environment on the organization. Emphasis will be on such concepts as division of work, delegation and decentralization, leadership,

motivation, work satisfaction; as well as planning, organizing, directing, and controlling.

**MAN 6121 Interpersonal Behavior and Analysis (MA) (3).** A human interaction/human relations training laboratory, designed to increase both self-awareness and understanding of behavior dynamics in groups. Course is intended to enable students to broaden their conceptual understanding of human interpersonal communications and conflict.

**MAN 6124 Human Interaction II: Organizational Consultation (MA) (3).** Theories and approaches to organizational development and change, with a particular focus on public schools and organizations. Supervised laboratory on systematic consultation and action skills, including schools and organizations. Supervised laboratory on systematic consultation and action skills, including method of assessment (survey feedback, milling, confrontation meetings, systems analysis); agenda-setting; feedback; coaching; third-party consultation for conflict management; and team training. Prerequisite: MAN 5123.

**MAN 6145 Decision Styles and Managerial Effectiveness (MA) (3).** An experiential, theoretical, and applied investigation of personal decision styles and their relation to management and human effectiveness. Focus upon analytic and intuitive styles of thinking.

**MAN 6204 Organization and Management Theory (MA) (3).** Analysis and design of the structure and process of complex organizations. Effects of task uncertainty, growth, power, goals, and information technology on organization structure and control.

**MAN 6245 Organizational Behavior (MA) (3).** Individual, interpersonal, and small group behavior in complex organizations. Focus on behavior, its causes, and management interventions to improve organizational effectiveness. Research methods to study organizational behavior.

**MAN 6265 Group Processes in Organizations (MA) (3).** The social and psychological processes of organizational functioning. The roles played by small groups in organizational settings.

**MAN 6295 Conflict in Organizations (MA) (3).** A critical examination of the role and impact of interpersonal and intergroup conflict in organizations. Models as approaches to utilizing and resolving conflict toward constructive

personal and organization ends will be emphasized.

**MAN 6311 Advanced Personnel Management (MA) (3).** Attention is focused on the theory and practice of modern personnel management, as related to other management functions. Topics include selection; training; job and performance evaluation; and incentive schemes. Special attention is given to human resources management and development at various organizational levels.

**MAN 6321 Personnel Selection and Placement (MA) (3).** Individual differences and their measurement in personnel selection and job placement. Job design and redesign. \*

**MAN 6331 Compensation Administration (MA) (3).** An in-depth analysis of Wages and salary administration, including such topics as job evaluation; wage incentive systems; and work sampling.

**MAN 6351 Personnel Training and Development (MA) (3).** Determining training needs. Training methods. The training staff. Supervisor development. Equal Employment Opportunity management.

**MAN 6405 Labor Relations (MA) (3).** Examines the collective bargaining system in the United States from the viewpoint of the practitioner. Various aspects of the environment, structure, processes, issues and impact of collective bargaining are considered. Special attention is given to the negotiation and administration of agreements.

**MAN 6411 Collective Bargaining Topics (MA) (3).** An advanced course in labor relations for students with some background who desire more depth than that provided in introductory courses. Topics of contemporary interest, such as public sector collective negotiations, are treated at length.

**MAN 6501 Operations Management (DS) (3).** This course covers analysis, design, and operations of organizational systems. The systems approach is used to provide a framework or general model of analysis, to which specific concepts, quantitative techniques, and tools can be related. The material presented has application to any organization of people and machines, including hospitals, governmental agencies, service organizations, and industrial concerns. Prerequisite: MAN 6569.

**MAN 6529 Seminar in Production Control Systems (DS) (3).** The control systems for production operations auto-

mation and its impact on organizations. Integrated operational-simulation approach. Group and individual projects.

**MAN 6559 Seminar in Management Science (DS) (3).** New topics application areas will be explored. Lectures will relate to the latest advances in the theory and application of management science. Prerequisite: Instructor's approval.

**MAN 6569 Managerial Decision-Making (DS) (3).** This course will investigate and analyze the decision-making problems that managers face in business, volunteer organizations, government, and the public sector. Emphasis will be placed on providing a variety of decision-making experiences for the student. Prerequisite: QMB 6603 or equivalent.

**MAN 6585 Productivity Management Seminar (DS) (3).** Analysis of productivity in manufacturing and service organizations and methodology for productivity improvement. Extensive cases, projects, tours, and guests speakers. Prerequisite: Graduate students (or CBA certificate students).

**MAN 6601 International Management (MA) (3).** Graduate seminar focusing on management issues confronting the multinational enterprise. Includes basic trade theory; tariffs and trade barriers; organizational transfer, foreign exchange; international financial management; export-import procedures; comparative business customs; personnel management; and institutions affecting the multinational manager.

**MAN 6603 Problems in Comparative Management (MA) (3).** Discussion of literature, readings, and cases, aimed at underscoring the differences and similarities in management behavior in different countries and cultures. General instruction in obtaining and utilizing comparative data on management differences.

**MAN 6606 International Business Environment (ME, MA) (3).** A macro-examination of economic, political, and cultural variables affecting the organization. Emphasis will be placed on social indications and societal forecasting of change; organizational responses to change; and the nature and rate of change in different societies.

**MAN 6608 International Business (MA) (3).** International variables as they affect managers. Theoretical constructs and their application to specific problems in international business.

**MAN 6615 International Labor-Management Relations (MA) (3).** Comparative analysis of selected industrial relations systems and impact on multinational firms and international labor movements. Emphasis on empirical models and management-oriented case studies.

**MAN 6617 Managing Global Production and Technology (MA) (3).** An exploration of the management of technology and its relationship to the dynamics of globalization of production in both manufacturing and service industries. Prerequisite: MAN 6608.

**MAN 6635 International Business Policy (MA) (3).** An analysis of corporate strategies in a rapidly developing and changing world environment. Emphasis will be placed on forecasting, planning, and contingency strategies. The course is taught by case method and stresses the environmental and institutional constraints on decision making within the organization. Corporate executives are invited to attend whenever possible. Prerequisites: ACG 6026, MAN 6245, FIN 6428, and MAR 6805 and Man 6603 or Man 6608.

**MAN 6675 Special Topics in International Business (MA) (3).** For groups of students who wish to study intensively a particular topic, or a limited number of topics, in international business, not offered elsewhere in the curriculum. Prerequisites: Approval of the faculty advisor, Department Chairperson, and Dean.

**MAN 6679 Master's Project in International Business (MA) (3).** An individual research project on an International business problem, which may include field work (including internship), library research, computer modeling, or the use of an approved research methodology. Prerequisites: Assignment of faculty advisor and permission of Department Chairperson.

**MAN 6695 Independent Study in Business (MA) (3).** Individual conferences; supervised readings; reports on personal investigations. Prerequisites: Assignment of faculty tutor and written permission of Department Chairperson, and Dean.

**MAN 6715 Business Environment and Public Policy (ME) (3).** An examination of the economic, political, social and moral context in which management decisions are made. The focus is on the public policy environment of business, whereby community direction is transformed into corporate behavior.

**MAN 6717 Corporate Negotiations (MA) (3).** An examination and analysis of corporate negotiation strategies in such areas as collective bargaining, mergers, joint ventures, and with government regulation agencies. The legal environment affecting the negotiated process will be closely scrutinized, as well as internal and external political processes. Prerequisites: ACG 6026, MAN 6245, FIN 6428, MAR 6805.

**MAN 6726 Policy Analysis (MA) (3).** The use of cases, guest lectures, and gaming to integrate the analysis and measurement tools, the functional areas and public policy issues. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Should be taken in the last semester of master's program.

**MAN 6805 Entrepreneurship (MA) (3).** A discussion of the general theories, principles, concepts and practices of entrepreneurship. Heavy emphasis is placed on lecture, readings, case studies and group projects.

**MAN 6830 Organization Information Systems (DS) (3).** Introduction to information systems and their role in organizations from a user's viewpoint. Survey and application of the basic concepts necessary for understanding information systems. Study of the main activities in the development cycle used to acquire information systems capability.

**MAN 6830L Organization Information Systems Laboratory (DS) (1).** Laboratory applications for MAN 6830.

**MAN 6905 Independent Study in Management (MA) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty sponsor, Department Chairman, and Dean required. P/F Only.

**MAN 6910 Research Methods in Management (MA) (3).** Covers the research methods and analytical techniques most widely used in research in human resources and general management. Emphasis is on helping students to become more aware of current techniques and their applications.

**MAN 6911 Research in Systems Development (DS) (3).** Conduct an individual research project or thesis on a topic in the area of computer personnel, systems analysis and design, or other areas within the framework of the MIS program, subject to the instructor's approval. Prerequisite: ISM 6155.

**MAN 6930 Master's Seminar in Management (MA) (1-3).** An examination of recent research findings in selected areas of current concern. Emphasis is placed on readings; active discussion; and small, short-term action and research projects. The student may make a preliminary selection of his/her master's thesis or project topic. Prerequisites: Consent of faculty sponsor, Department Chairperson, and Dean.

**MAN 6974 Master's Project in Management (MA) (1-6).** Each student is required to develop and conduct an individual research project or thesis on a topic of interest. The topic will be chosen in consultation with a faculty member in the College.

**MAN 7146 Leadership I (MA) (3).** Course identifies leadership theories and research bearing on modern management practice. Behavioral, situational and transformational theories of leadership are emphasized, compared and evaluated.

**MAN 7147 Leadership II (MA) (3).** Draws on research and case studies for understanding of adaptive leadership in turbulent, uncertain environments. Emphasis on effective management of innovation, entrepreneurial activity and new ventures.

**MAN 7155 Fundamentals of Behavioral Research (MA) (3).** Analytical tools to conduct systematic research. Methods of data collection in lab, survey and field research. Emphasis on principles of measurement and statistics to interpret/report behavioral data.

**MAN 7206 Organizational Analysis (MA) (3).** Develops skills in organizational problem-solving through applications of theory and research to actual problems. Emphasis on needs analysis, process consultation, team-building and action research.

**MAN 7207 Theories of Organization (MA) (3).** Organization functioning from a macro perspective; emphasis on evolution, structure, design and processes of complex systems. Study of communication/information networks, inter-group processes and control strategies.

**MAN 7235 Management Philosophy and Strategy (MA) (3).** Compares various cross-cultural management philosophies to structure and function of different types of organizations. Emphasis on how to develop and implement a management strategy for

maximum productivity in different organizations.

**MAN 7275 Organizational Behavior Management (MA) (3).** An introduction to the study of human behavior in organizations. Emphasis is given to management of individual and group processes including conflict attitudes, decision making, motivation and stress.

**MAN 7305 Human Resource Management (MA) (3).** Personnel management topics including personnel selection, performance appraisal, training design, employee development, and compensation administration. Legal and practical issues are emphasized.

**MAN 7412 Labor-Management Topics (MA) (3).** Presents various aspects of the labor-management relationship to provide a contemporary perspective. Emphasis on structure, processes, strategies and legal issues in collective negotiation and industrial relations.

**MAN 7529C Seminar in Operations Management (DS) (3).** Concepts, tools and recent research developments in the design, planning and control of operations management systems in business and service organizations. Prerequisite: ISM 7083. Corequisite: ISM 7084.

**MAN 7609 Comparative Management (MA) (3).** Course focus is cross-cultural management, i.e., how cultural values influence managerial behavior. The problems of cross-cultural communications, leadership, motivation, and decision making are examined. Prerequisites: Admission to Doctoral program and completion of doctoral core.

**MAN 7616 Multinational Firm Global Strategy (MA) (3).** Overview of the strategic management and international business concepts that frame strategic activity in MNCs. Competitive business strategies in global and multidomestic industries. Prerequisite: Completion of business Ph.D. core.

**MAN 7620 International Business Operations I (MA) (3).** Examination of the functional management, operations and concerns of international businesses. Emphasizes analysis of problems in managing joint ventures, licensing, barter, and technology transfer. Prerequisites: Admission to Doctoral program and completion of doctoral core.

**MAN 7621 International Business Operations II (MA) (3).** Focus on political, economic, and national security issues which influence IB operations or

strategies. Examines techniques for political and economic risk, assessment and reactions to such influences. Prerequisites: Admission to Doctoral program and completion of doctoral core.

**MAN 7640 International Business Research Methods (MA) (3).** Overview of IB academic research, emphasizing topics, literature, methods, information sources, applications, problems, and journal characteristics. Prerequisites: Admission to business Doctoral program and completion of doctoral core.

**MAN 7718 Analysis of Corporate Policy Methods (MA) (3).** Links functional areas of management to provide integrated view of organization and public policy. Emphasis on measurement, analysis and conceptualization of organization as a totality of operations.

**MAN 7814 Advanced Management Research (MA) (3).** Covers applications of analytical methods in contemporary management research. Emphasis is given to complex research design strategies including multivariate techniques and multidimensional scaling.

**MAN 7895 Seminar in Management (MA) (3).** Key concepts in management ranging from individual worker styles to business ethics. Emphasis on topics such as men and women in organization, decision making styles, and attribution management.

**MAR 6075 Current Issues in Marketing I (ME) (3).** Intensive study of various topic areas in marketing. Course emphasizes student reading and research, with oral and written reports. Students electing to take this seminar may take no more than 3 credit hours of independent study in marketing. Prerequisite: MAR 6816.

**MAR 6158 International Marketing (ME) (3).** This course discusses the nature and scope of international marketing, and explores problems facing multinational firms and other international marketing organizations, together with strategies for foreign market penetration. Prerequisite: MAR 6816 or permission of instructor.

**MAR 6336 Advanced Promotional Strategy (ME) (3).** The course focuses on planning, problem solving, and decision making, as they apply to promotion programs. Primary emphasis is on advertising, with discussion of the role of promotion in relation to other elements of the marketing program. Prerequisite: MAR 6816.



**MAR 6406 Advanced Sales Management (ME) (3).** Analysis of personal selling's roles in marketing strategy using detailed case studies on field sales management, working with channel organization, and planning and controlling sales operations.

**MAR 6506 Advanced Consumer Behavior (ME) (3).** Modern comprehensive models of consumer behavior are utilized as a framework for understanding consumer decision processes. Prerequisite: MAR 6816.

**MAR 6646 Advanced Marketing Research (ME) (3).** The role of research in providing information for marketing decision-making, including an examination of the research process and the tools available to the researcher. Prerequisite: MAR 6816 or permission of instructor.

**MAR 6707 Current Issues in Marketing II (ME) (3).** Students electing to take this seminar may not take independent study in marketing. Prerequisite: MAR 6075.

**MAR 6805 Marketing Management (ME) (3).** A study of analysis and application of theory and problem solving in marketing management. Emphasis will be on the role of marketing in the organization; planning the marketing effort; management of the marketing organization; control of marketing operations; and evaluation of the marketing contribution.

**MAR 6816 Advanced Marketing Management (ME) (3).** Course emphasis is on application and integration of concepts and tools, through participation in the marketing management of a firm in competition with other firms. The course's focal point is a computerized marketing management simulation. Prerequisite: MAR 6805 or equivalent.

**MAR 6915 Independent Study in Marketing (ME) (1-6).** Individual conferences; supervised reading; reports on personal investigations. Consent of faculty tutor, Department Chairperson and Dean required.

**MAR 6936 Special Topics in Marketing (ME) (1-6).** For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

**MAR 7246 Seminar in International Marketing (ME) (3).** Analyzes distinctive characteristics and trends in foreign markets. Explores alternative international marketing strategies, con-

sidering critical environmental differences among countries.

**MAR 7622 Marketing Research Methodology I (ME) (3).** Philosophy, concepts, methods of marketing research design. Experimental methods, sampling procedures, measurement techniques, other methodological considerations. Prerequisites: Successful completion of first year research methods requirements in a College of Business Ph.D. Program or permission of instructor.

**MAR 7623 Seminar in Marketing Environment (ME) (3).** Examines the dynamic interaction between marketing management and the corporate environment. Encourages development of an ability to design and implement effective marketing strategies.

**MAR 7667 Seminar in Marketing Management (ME) (3).** Analytical approaches to strategic and tactical marketing and public policy decisions. Emphasis is on relevant concepts from behavioral sciences as applied to marketing decisions.

**MAR 7786 Seminar in Marketing Theory (ME) (3).** Intensive analysis of the nature and role of hypotheses, generalizations, and empirical regularities. Critical examination of theories of marketing and interaction of marketing theory and practice.

**MAR 7815 Seminar in Foundations of Marketing Thought (ME) (3).** Foundations of marketing, interdisciplinary relationships; reviews major research areas: the marketing mix, consumer choice models, segmentation, stochastic, and analytical models.

**MAR 7845 Seminar in Services Marketing (ME) (3).** Analyzes the nexus between services and marketing management. Identifies and appraises alternative corporate strategies within industries such as banking and finance, insurance, hospitality, entertainment and leisure, health care, and education.

**MAR 7875 Sectorial Marketing (MA) (3).** Course includes retailing, wholesaling, pricing, distribution, advertising, sales promotion and management, personal selling, international services and macromarketing; and marketing and economic development.

**MAR 7979 Doctoral Research in Marketing (ME) (1-6).** Research while enrolled for a doctoral degree under the direction of faculty members. Prerequisite: Permission of Department.

**QMB 6603 Quantitative Methods in Management (DS) (3).** Introduction to basic quantitative tools for the analysis of problems arising in the management of organizations, and the application of these tools to real-life problems. Prerequisites: College Algebra and completion of the Computer Programming Proficiency requirement.

**QMB 6805 Deterministic Models for Management Analysis (DS) (3).** Applications of deterministic models such as linear and nonlinear programming, network analysis (PERT), dynamic programming, and branch and bound algorithms to managerial problems of allocation, planning, scheduling, investment, and control.

**QMB 6845 Simulation of Management Systems (DS) (3).** Basic concepts of computer simulation of systems; application of these concepts to a variety of management problems. Industrial dynamics, urban dynamics, and large system simulation. Simulation in economic analysis, heuristic methods, and management games are covered. Prerequisites: MAN 6569 and a Computer Programming Language.

**QMB 6855 Stochastic Models for Management Analysis (DS) (3).** Applications of probabilistic models (such as queuing, inventory, and renewal) to their managerial problems.

**QMB 6875 Stochastic Models for Project Management (DS) (3).** Review of deterministic models and principles. Introduction to GERT, critical path methods, criticality index, and resource considerations in stochastic networks. Emphasis on operational decision-making, advanced topics, and individual projects. Students use the computer, and existing programs, to analyze hypothetical project networks, and learn to interpret the results in order to facilitate operational decisions.

**QMB 6905 Independent Study in Decision Sciences (DS) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of Instructor, Department Chairperson and Dean required. P/F only.

**QMB 6934 Seminar in Decision Sciences (DS) (1-3).** An examination of recent research findings in selected areas of current concern. Emphasis is placed on readings; active discussion; and small, short-term action and research projects. Consent of instructor required.



**QMB 6974 Project in Decision Sciences (DS) (1-6).** Each student is required to develop and conduct an individual research project or thesis on a topic of interest. The topic will be chosen in consultation with a faculty member in the College and approved by the Department Chairperson.

**QMB 7935 Seminar in Decision Sciences (DS) (3).** Critical review and analysis of recent and important research developments in the area of decision sciences. Prerequisites: ISM 7083 and ISM 7087.

**REE 5115 Income Property Appraisal (FI) (3).** Valuation and appraisal framework applied to income properties; capitalization; rates and techniques; discounting and compound interest; mortgage-equity analysis. Includes Ellwood analysis; the role of computers; valuation as a guide to business decisions.

**REE 6020 Industrial Real Estate I (FI) (3).** General overview of industrial real estate, focusing on types of activities; locational requirements; financing techniques; brokerage; government influence; current trends; technological change; characteristics of industrial buildings.

**REE 6021 Industrial Real Estate II (FI) (3).** Introduction to investment and valuation problems in industrial real estate. Topics include: taxation and investment analysis; discounted cash flow techniques; appraisal framework applied to income properties. A computer will be utilized in approaching the above problems.

**REE 6105 Appraisal of Real Estate (FI) (3).** Valuation and appraisal framework applied to residential and income producing property; role of computers; valuation theory and process as a guide to business decisions. Prerequisite: REE 4303 or permission of instructor.

**REE 6195 Seminar in Real Estate Valuation Theory and Practice (FI) (3).** A study of the process of property valuation, utilizing cost, market and income approaches. The role of computers and mass appraisal techniques will also be examined. Prerequisites: Graduate standing and permission of instructor.

**REE 6207 Real Estate Financial Analysis (FI) (3).** Financial analysis and structuring of real estate projects; traditional and creative concepts for construction and permanent financing; portfolio decisions; government

programs; money and mortgage markets. Prerequisite: REE 6306 or permission of instructor.

**REE 6295 Seminar in Real Estate Finance (FI) (3).** A study of financial institutions, their methods; and inter-regional flows of funds in mortgage markets. Further emphasis is placed on national economic policies affecting mortgage markets. Prerequisites: Graduate standing and permission of instructor.

**REE 6305 Real Estate Investment (FI) (3).** Advanced concepts of acquisition, ownership, and disposition of investment property; taxation; risk and return; cash flow forecasting; financial structuring process; case analysis; strategy formulation. Prerequisite: REE 6306 or permission of instructor.

**REE 6306 Real Property Analysis (FI) (3).** A study of the decision making processes of real property asset management. Private and public policy issues regarding the housing process and the regulation of the real property business environment. Legal considerations of real property ownership, financing and transfer of interests. Prerequisite: Consent of instructor.

**REE 6395 Seminar in Real Estate Investment and Taxation (FI) (3).** The techniques of real estate investment analysis, utilizing present value and cash flow approaches. The impact of Federal taxation on real estate investment decisions. Prerequisites: Graduate standing and permission of instructor.

**REE 6435 Legal Environment of Real Estate (FI) (3).** Legal environment of real property ownership, transfer and brokerage; estates in land; sales contracts; mortgage transactions; titles; conveyances; landlord and tenant; restrictions; zoning; and eminent domain; does not cover Florida Real Estate License Law or licensing regulations of Florida Real Estate Commission; not a license prep course. Prerequisite: REE 4043 or REE 6306 or permission of instructor.

**REE 6505 Real Estate Management (FI) (3).** Advanced theories and techniques of professional management of real estate; developing a management plan; merchandising space; market analysis; maintenance; operating budgets; fiduciary relationships. Prerequisite: REE 6306 or permission of instructor.

**REE 6715 Regional Real Estate Development (FI) (3).** Operation of

real estate markets in land allocation; land use decision making in real estate; real estate feasibility studies, applied to specific real estate projects. Prerequisite: REE 6306 or permission of instructor.

**REE 6734 Real Estate Land Development (FI) (3).** Real estate development, acquisition of raw land; zoning; subdivision into sites; provision of utilities and services; financing; merchandising of improved sites. Emphasis on design and development of residential communities.

**REE 6736 Real Estate Land Planning (FI) (3).** Advanced theories of city growth and structure; operations of the real estate market in land allocation; current practices in real estate land planning. Prerequisite: REE 6306 or permission of instructor.

**REE 6755 Real Estate and Regional Development Policy (FI) (3).** An advanced capstone course integrating all the aspects of real estate and regional development learned in previous courses, projects, cases, and field trips. Prerequisite: REE 6306 or permission of instructor.

**REE 6795 Seminar in Urban Housing Policy Problems (FI) (3).** Examination of national housing policies and their formulation; the role of the public and private sectors in regard to housing problems; effectiveness of various housing policies. Prerequisites: Graduate standing and permission of instructor.

**REE 6816 Real Estate Marketing (FI) (3).** Techniques of selecting, training, and compensating sales personnel; obtaining and controlling listings; creative selling techniques; promotion, advertising, and public relations; growth; ethics. Prerequisite: REE 6306 or permission of instructor.

**REE 6825 Industrial Brokerage (FI) (3).** Defines distinction between industrial brokerage and general real estate brokerage; role and functions of the industrial broker; industrial brokerage practice. Includes negotiating and leasing; regulations and ethics.

**REE 6906 Independent Study in Real Estate (FI) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson, and Dean required.

**REE 6932 Special Topics in Real Estate (FI) (1-6).** For groups of students desiring intensive studies of a particular topic or a limited number of topics, not

otherwise offered in the curriculum. Consent of faculty tutor and Department Chairperson required.

**REE 6935 Seminar In International Real Estate (FI, MA) (3).** Current trends and issues affecting real estate on an international level. Topics include: the multinational corporation and its location decisions; foreign taxation; international trade and exchange rates.

**REE 6946 Industry Project (FI) (3).** Advanced individual or group study of specialized problems in the real estate field. Guidance of study to be provided by real estate faculty. Prerequisite: Permission of advisor.

**RMI 5175 Life and Health Insurance (FI) (3).** A review of life insurance contracts. Mathematics of Life Insurance. Fundamentals of Health Insurance. Life Insurance Accounting. Reserves, Dividend, Non-forfeiture values. Operations and Investment.

**RMI 5297 Property and Liability Insurance (FI) (3).** Comparative study of the structures and forms of the major property and liability insurance, policies, personal and commercial lines. Analytic determination of the choice of the optimal mode of protection or coverage. Major functions of insurers and regulation.

**RMI 6008 Graduate Survey of Insurance (FI) (1-6).** Graduate examination of current problems in insurance, including theory, uses of insurance in business organizations; property and liability insurance; life and health insurance.

**RMI 6178 Mathematics of Life Insurance (FI) (3).** Present Values and Future Values of Lump Sums and Annuities. Mortality Tables Single Premiums, Annual Premiums and Net Level Premiums. Reserves, Nonforfeiture Values and Dividends. Prerequisite: MAC 3233 or equivalent.

**RMI 6912 Independent Study in Insurance (FI) (1-6).** Supervised study of insurance or insurance related topics, developments, current issues and anticipated trends. Study may be designed to investigate a specialized area or adopt a more general approach. Consent of faculty supervisor, Department Chairperson, and Dean required.

**RMI 6936 Special Topics in Insurance (FI) (1-6).** Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the Curriculum. Consent

of faculty supervisor and Department Chairperson required.

**TAX 5066 Tax Research and Reporting (AC) (3).** A study of tax planning aspects of a variety of business and other transactions. Emphasis will be placed upon perceiving tax issues and conducting research to resolve them. Prerequisite: Permission of Accounting certificate program advisor.

**TAX 5106 Corporate Taxation (AC) (3).** Tax implication of corporate formations, distributions, redemptions, liquidations, divisions, reorganizations, collapsibles, attributes, consolidations, S-Corp, AET and PHC's. Prerequisites: Permission of Accounting certificate program advisor.

**TAX 5406 Taxation of Estates and Trusts (AC) (3).** Study of income tax aspects of decedents, followed by income taxation of estates and trusts (subchapter J). Special emphasis on throw-back rules, grantor trusts, charitable remainder trusts, and foreign trusts. Prerequisite: Permission of Accounting certificate program advisor.

**TAX 5506 International Dimensions of Taxation (AC) (3).** Tax provisions affecting foreign corporations and non-resident aliens, as well as those tax provisions affecting U.S. person's business and investment activities outside the U.S. Prerequisite: Permission of Accounting certificate program advisor.

**TAX 5725 Tax Planning for Managers (AC) (3).** An exploration of the concepts of federal income taxation and tax planning, from the point of view of the manager. Prerequisites: ACG 6308 and permission of accounting certificate program advisor.

**TAX 5875 Seminar In Taxation (AC) (3).** An in-depth study of recent legislative, administrative, and judicial developments in taxation. Prerequisites: TAX 4001 or equivalent, and permission of Accounting certificate program advisor.

**TAX 5904 Independent Study In Taxation (AC) (3).** Individual conferences, supervised readings, reports on personal investigations. Prerequisite: Written permission of instructor, Accounting certificate program advisor, School director, and dean.

**TAX 5936 Special Topics In Taxation (AC) (3).** Intensive study for groups of students of a particular topic or topics not otherwise offered in the curriculum. Prerequisite: Written permission of instructor, Accounting certificate program advisor, School director, and dean.

**TAX 6005 Income Tax (AC) (3).** A survey of federal income taxation, with emphasis on the taxation of individuals and corporations and the ethics of income tax accounting. Prerequisites: ACG 6115 and admission to a graduate program in the School of Accounting or permission of the School Director. Not open to those with undergraduate accounting degrees.

**TAX 6015 Taxation of Corporations and Partnerships (AC) (3).** An in-depth study of income taxation of corporations and partnerships, including tax planning. Prerequisite: TAX 4001 or equivalent with a grade of 'C' or higher and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6065 Tax Research (AC) (3).** An in-depth study and application of both traditional and computer-assisted tax research tools and of relevant practice and procedural mechanisms affecting taxation. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6105 Taxation of Corporations I (AC) (3).** The study of federal tax consequences of the formation and operation of corporations; distributions and redemptions; elections of Subchapter S status. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6115 Taxation of Corporations II (AC) (3).** The study of federal tax consequences of the liquidation and reorganization of corporations; multiple corporations; advanced topics in corporate taxation. Prerequisites: TAX 6065 and TAX 6105, and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6205 Partnership Taxation (AC) (3).** The intensive study of the formation, operation, and dissolution of partnerships (general and limited). Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6405 Estate and Gift Taxation (AC) (3).** The study of the federal estate tax and federal gift tax provisions. Prerequisites: TAX 6065, and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6415 Fiduciary Accounting and Taxation (AC) (3).** The study of the income taxation of estates, trust, and the beneficiaries thereof, including the determination of distributable net income, and throwback rules. The grantor trust and income in respect of a decedent is emphasized. The use of trusts in tax and estate planning is also explored. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6445 Estate Planning (AC) (3).** An in-depth discussion of the use of estate tax planning tools, such as lifetime gifts, life insurance, the marital deduction, the use of trusts, future interests, annuities, powers of appointment, charitable transfers, and postmortem planning. Prerequisites: TAX 6405 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6505 International Taxation I (AC) (3).** Federal income tax provisions applicable to non-resident aliens and foreign corporations. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6515 International Taxation II (AC) (3).** Federal income tax provisions applicable to U.S. persons, business, and investment activities outside the U.S. Prerequisite: TAX 6505 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6726 Tax Planning for Managers (AC) (3).** An exploration of the concepts of federal income taxation and tax planning, from the point of view of the manager. Prerequisites: ACG 6026 or equivalent and permission of Accounting advisor.

**TAX 6805 Tax Policy (AC) (3).** A study of the tax accounting concepts and the judicial doctrines inherent in the federal tax law, tax planning, and tax policy. Prerequisite: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6835 Taxation of Deferred Compensation (AC) (3).** The taxation of qualified and non-qualified pension and profit-sharing plans, stock options, annuities, lump-sum distributions, death benefits, rollovers, self-employment plans, employee stock ownership plans, etc. Prerequisites: TAX 6065 and admission to a graduate program

in the School of Accounting or permission of the School Director.

**TAX 6875 Current Developments in Taxation (AC) (3).** The study of recent legislative, administrative and judicial developments in taxation. Prerequisites: TAX 6065 and at least four additional graduate tax courses and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6876 Transactions in Property (AC) (3).** An in-depth investigation into tax problems relating to basis, capital gains and losses, and nonrecognition provisions for transactions in property with special emphasis on personal property transactions and securities investments. Prerequisites: TAX 6065 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6877 Seminar in Taxation (AC) (3).** Intensive study of a particular topic or a limited number of topics. The topics included in this course will depend upon the availability of faculty with expertise in the following special classes of tax problems: advanced corporate taxation; taxation of not-for-profit institutions; interstate, state and local taxation; and others, as current developments demand. Prerequisites: TAX 6065 and TAX 6805 and admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6905 Independent Study in Taxation (AC) (1-3).** Individual conferences, supervised readings; reports on personal investigations. Prerequisites: Admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 6935 Special Topics in Taxation (AC) (1-3).** Intensive study for groups of students of a particular topic(s) not otherwise offered in the curriculum. Prerequisite: Admission to a graduate program in the School of Accounting or permission of the School Director.

**TAX 7067 Seminar: Special Topics in Taxation Research (AC) (3).** Topics vary according to instructor and student interest in problems and issues on the frontier issues of taxation. Prerequisite: Permission of Doctoral advisor in Accounting.

**TAX 7815 Seminar: Tax Policy: An Analysis of the Issues (AC) (3).** An in-depth examination of the horizontal and vertical equity issues in taxation, the effects on income distribution, business

decisions, foreign balance of payments, public finance issues, and economic policy. Emphasized are the areas of empirical research via a vis legal research. Prerequisite: Permission of Doctoral advisor in Accounting.

**TRA 5245 Transportation Logistics (ME) (3).** Quantitative methods applied to solving problems in business logistics; mathematical and statistical models; optimization theory and simulation. Problems selected from areas of physical distribution management, inventory control, mode selection, and facility locations.

**TRA 5401 Transportation Operations and Carrier Management (ME) (3).** Contemporary management techniques as applied to carriers; management problems peculiar to transportation firms; economic analysis of marketing problems; capital formation; costs; pricing; labor relations; and government regulation.

**TRA 6015 Graduate Survey of Transportation Management (ME) (3).** Graduate survey of transportation, its elements, and their impact on society. History, economics, and regulatory principles in transportation. Current policies and problems for all the major transportation modes.

**TRA 6905 Independent Study in Transportation (ME) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson, and Dean required.

**TRA 6936 Special Topics in Transportation (ME) (1-6).** For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

## College of Business Administration

Dean **Harold E. Wyman**  
Associate Dean **Donald W. Fair**  
Associate Dean **Dana L. Farrow**  
Associate Dean **George Simmons**  
Director, School of Accounting **James H. Schelner**

### Chairpersons:

Decision Sciences and Information Systems **Daniel Robey**  
Finance **Arun J. Prakash**  
Management and International Business **Enzo R. Valenzi**  
Marketing and Business Environment **Barnett A. Greenberg**

### Faculty

**Ahlers, Richard, M.B.A.** (University of Detroit), Instructor, Management and International Business

**Anderson, Gary, Ph.D.** (University of Illinois), Assistant Professor, Finance

**Auster, Rolf, Ph.D.** (Northwestern University), CPA, CMA, Professor, Accounting

**Barber, Joel, Ph.D.** (University of Arizona), Assistant Professor, Finance

**Bates, Constance S., D.B.A.** (Indiana University), Associate Professor, Management and International Business

**Batra, Dinesh, Ph.D.** (Indiana University), Assistant Professor, Decision Sciences and Information Systems

**Bear, Robert M., Ph.D.** (University of Iowa), Professor, Finance and Director, Broward Programs

**Beaton, William R., Ph.D.** (Ohio State University), Professor, Finance

**Berry, Delano H., Ph.D.** (University of Kentucky), CMA, Assistant Professor, Accounting

**Bierwag, Gerald O., Ph.D.** (Northwestern University), Ryder System Professor of Business Administration, Finance

**Campfield, William, Ph.D.** (University of Illinois), CPA, Professor Emeritus, Accounting

**Carmone, Frank, Ph.D.** (Waterloo University), Business Men's Professor of Marketing

**Carter, Jack L., Ph.D.** (University of Cincinnati), Assistant Professor, Accounting

**Chang, Chung-Hao, Ph.D.** (Northwestern University), Assistant Professor, Finance

**Chang, Lucie S., Ph.D.** (University of Texas at Austin), Professor, and Associate Director, Accounting

**Choe, Yong S., (University of Florida), Assistant Professor, Accounting**

**Comer, Lucette, Ph.D.** (University of Maryland), Assistant Professor, Marketing and Business Environment

**Dalgier, Robert T., Ph.D.** (University of Oklahoma), Associate Professor, Finance

**Dandapani, Krishnan, Ph.D.** (Pennsylvania State University), Associate Professor, Finance

**Davidson, Lewis F., Ph.D.** (Pennsylvania State University), Professor

**Dessler, Gary, Ph.D.** (City University of New York), Professor, Management and International Business

**Dieguez, Manuel, M.S.M.** (Florida International University), CPA, Lecturer, Accounting

**Dittenhofer, Mortimer, Ph.D.** (American University), Professor, Accounting

**Dorsett, Herman W., Ed.D.** (Columbia University), Associate Professor, Management and International Business

**Elam, Joyce, J.** (University of Texas, Austin), Professor and James L. Knight Eminent Scholar, Decision Sciences and Information Systems

**Fair, Donald W., M.Acc.** (Bowling Green State University), CPA, Instructor, Accounting, and Associate Dean

**Farrow, L. Dana, Ph.D.** (University of Rochester), Professor, Management and International Business and Associate Dean

**Fiedler, Anne, M.B.A.** (University of Miami), Instructor, Marketing and Business Environment

**Friday, Earnest, Ph.D.** (University of Miami), Assistant Professor, Management and International Business

**Garcia, Georgina, M.S.M.** (Florida International University), CPA, Lecturer, Accounting

**Gayle, Dennis J., Ph.D.** (UCLA), Associate Professor, Marketing and Business Environment

**Gilbert, G. Ronald, Ph.D.** (University of Southern California), Associate Professor, Management and International Business

**Goodrich, Jonathan N., Ph.D.** (State University of New York at Buffalo), Professor, Marketing and Business Environment

**Greenberg, Barnett A., DBA** (University of Colorado), Professor

and Chairperson, Marketing and Business Environment

**Guo, Min H., Ph.D.** (University of Arizona), Assistant Professor, Accounting

**Gupta, Sushil K., Ph.D.** (University of Delhi), Professor, Decision Sciences and Information Systems and Vice Provost

**Hallbauer, Rosalie C., Ph.D.** (University of Florida), CPA, CMA, Associate Professor, Accounting

**Hamid, Shahid, Ph.D.** (University of Maryland), Assistant Professor, Finance

**Hendrickson, Harvey S., Ph.D.** (University of Minnesota), CPA, Professor, Accounting

**Hodgetts, Richard M., Ph.D.** (University of Oklahoma), Professor, Management and International Business

**Hogner, Robert H., Ph.D.** (University of Pittsburgh), Associate Professor, Marketing and Business Environment

**Jarrett, Royland D., M.B.A.** (American University), Regional Manager, Small Business Development Center

**Jerome, William T., III, D.C.S.** (Harvard University), Distinguished University Professor, Management and International Business

**Jordan, Willabeth, M.P.A.** (Florida International University), Instructor, Management and International Business, and Director, Center for Management Development

**Kemerer, Kevin, M.Acc.** (Virginia Polytechnic Institute), Instructor, Accounting

**Keys, James D., M.B.A.** (Florida International University), Instructor, Finance

**Kirs, Paeter J., Ph.D.** (State University of New York at Buffalo), Assistant Professor, Decision Sciences and Information Systems

**Koulamas, Christos P., Ph.D.** (Texas Tech University), Assistant Professor, Decision Sciences and Information Systems

**Kranendonk, Carl J., M.B.A.** (University of Tulsa), Instructor, Marketing and Business Environment

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**Kyparisis, Jerzy, D.Sc.** (George Washington University), Associate Professor, Decision Sciences and Information Systems

**Laskey, Henry A., Ph.D.** (University of Georgia), Assistant Professor,

- Marketing and Business Environment*
- Lavin, David, Ph.D.** (University of Illinois), CPA, Associate Professor, Accounting
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- Magnuson, Karl O., Ph.D.** (University of Wisconsin), Associate Professor, Management and International Business
- Maldique, Modesto A., Ph.D.** (Massachusetts Institute of Technology), Professor, Management and International Business, and University President
- Mallen, David C., M.B.A.** (Columbia University), Information Bid Coordinator, Small Business Development Center
- Mann, Phillip H., Ed.D.,** (University of Virginia), Lecturer, Department of Management and International Business and Director, Entrepreneurial Studies
- Mandakovic, Tomislav, Ph.D.** (University of Pittsburgh), Professor, Decision Sciences and Information Systems
- McClung, Rose Marie, M.Ed.,** (University of Miami), Coordinator, Entrepreneurial Studies
- Moss, Sherry, Ph.D.** (Florida State University), Assistant Professor, Management and International Business
- Moat, Kenneth S., Ph.D.** (University of Florida), CPA, F.C.A., Professor, Accounting
- Muralidhar, Krishnamurthy, Ph.D.** (Texas A&M University), Associate Professor, Decision and Information Systems
- Nesbit, Marvin D., M.B.A.** (University of West Florida), Director, Small Business Development Center
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- Nunez, Leandro S., J.D.** (Nova University), CPA, CMA, Lecturer, Accounting
- Oliva, Robert B., LL.M.** (University of San Diego) CPA, Associate Professor, Accounting
- Ortiz, Marta, Ph.D.** (University of Miami), Associate Professor, Marketing and Business Environment
- Pak, Simon, Ph.D.** (University of California, Berkeley) Associate Professor, Finance
- Parthigari, Ali, M. Ph.D.** (University of Maryland), Professor, Finance and Director, MBA Program
- Paul, Karen, Ph.D.** (Emory University), Professor, Marketing and Business Environment
- Pernas, Elena M., M.B.A.** (University of Miami), Instructor, Finance
- Polster, Eleanor, M.B.A.** (Florida International University), Instructor, Management and International Business
- Pomeranz, Felix, M.S.** (Columbia University), CPA, CSP, Distinguished Lecturer, Accounting, and Director, Center for Accounting, Auditing, and Tax Studies
- Pradas, Antonio F., M.S.,** (Massachusetts Institute of Technology), Lecturer, Management, and Director, International Executive Education
- Prakash, Arun, Ph.D.** (University of Oregon), Professor and Chairperson, Finance
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- Wyman, Harold E., Ph.D.** (Stanford University), Professor, Accounting, and Dean
- Yeaman, Dorla, J.D.** (University of Tennessee), Associate Professor, Accounting
- Yeh, Shu, Ph.D., (UCLA)**, Assistant Professor, Accounting
- Zanakls, Steve H., Ph.D.** (Pennsylvania State University), Professor, Decision Sciences and Information Systems
- Zdanowicz, John S., Ph.D.** (Michigan State University), Professor Finance and Director, Center for Banking and Financial Institutions
- Zegan, Peter J., M.S.** (University of Florida), Lecturer, Decision Sciences and Information Systems

## College of Education

The College of Education has a dual mission: to prepare competent and creative professionals to both serve and provide leadership in existing learning environments; and to address the social, economic, and political conditions that restrict the possibilities of educational opportunity in a multicultural, pluralistic society. Accordingly, the College concerns itself with both education and social change.

To support its mission, the College is organized into six separate but related departments:

- Educational Leadership and Policy Studies
- Educational Psychology and Special Education
- Elementary Education
- Foundations: Urban, Multicultural, International Education
- Health, Physical Education, and Recreation
- Middle, Secondary, and Vocational Education

Programs of studies include adult education and human resource development, art education, biology education, chemistry education, community college teaching, early childhood education, educational leadership, educational psychology (including counseling and school psychology), elementary education, English education, health education (exercise physiology), history education, home economics education, international development education, mathematics education, modern language education, music education, parks and recreation management (leisure service management, therapeutic recreation, physical education (teacher certification for grades K-8, teacher certification for grades 6-12, and sports management), physics education, reading education, social studies education, special education, teaching English as a Second Language (TESOL), and vocational education programs (administration and supervision, health occupations education, technology education, post-secondary technical education, vocational home economics education, and vocational industrial education).

The College also administers the Urban Education Program. It is comprised of the Urban Education Certificate Program and the Master's Degree in Urban Education.

Applicants to the College's programs should carefully examine the choices of major concentrations and program objectives. Because there are

occasional revisions of College of Education curriculum during the academic year, some curriculum changes may not be reflected in the current catalog. Prospective students are advised to contact appropriate advisors to ask for current information regarding specific programs of interest.

General advisement is available by telephone: (305) 348-2768 for University Park, (305) 940-5820 for North Miami Campus. Broward residents may call (305) 523-4422 for North Miami Campus or 475-4156 for the Broward Program. Dade residents may call (305) 948-6747 for the Broward Program. Specific program advisement is available by prearranged personal appointment with advisors at all locations.

**Note:** The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advanced notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

### Master's, Specialist, and Doctoral Degrees

Graduate studies offered by the College provide specialization in degree programs developed to reflect individual student interests. A graduate program may include courses, seminars, field experiences, research courses, theses, and dissertations, depending upon the student's level and area of emphasis.

#### Master's Degree Programs

Applicants for admission to most Master's programs in Education must hold or qualify for Florida teacher certification in the appropriate area. All applicants must also satisfy Board of Regents admission requirements: A GPA of 3.0 in the last 60 semester hours of upper division undergraduate study or 1000 on the Graduate Record Examination (GRE). Applicants admitted with a pending GRE score must submit a test score within one semester to be fully admitted or become a candidate for graduation. All applicants,

regardless of GPA, must submit a GRE score.

**Note:** Specific programs may have higher standards for admission. Having a minimum GPA and/or GRE score does not assure admission to a program. Admission is subject to the approval of program faculty.

Prior to formal admission to a graduate program, students may be approved to take 12 semester hours of 5000 level graduate credit as non-degree seeking students, which, if applicable to the major field of study and approved by an advisor, may be applied to the degree program.

Graduate students will complete at least 30 semester hours of study beyond the bachelor's degree to earn a Master of Science degree in education. However, specific programs may require more than the minimum number of hours. Students may transfer a maximum six semester hours taken at another accredited college or university toward a master's degree program having 30-45 semester hours, and a maximum nine semester hours toward a program having more than 45 semester hours with advisor's approval.

Master's program students must maintain an overall GPA of 3.0 in order to graduate. No more than two grades of 'C' and no grades of 'D' or 'F' received in courses that are part of a master's degree program of study will be accepted toward graduation.

No more than two workshop courses may be included in a master's degree program.

Applicants who do not hold or qualify for Florida Teacher Certification may be eligible for the Alternative Track Master of Science Degree described in the Middle, Secondary, and Vocational Education section.

#### Educational Specialist Degree Programs

The College offers Educational Specialist degree programs in Curriculum and Instruction, in Educational Leadership, and in School Psychology. The programs require a minimum of 36 semester hours of work at the University beyond the Master's degree. However, specific programs may require more than the minimum number of hours and may include six semester hours of thesis if that option is chosen.

Admission requirements and transfer of credit are the same as for the master's programs.

Other program requirements are contained in the program descriptions which may be obtained from each program leader.

## Doctor of Education Degree Programs

The Doctor of Education degree is offered in Adult Education and Human Resource Development (including a track in Vocational and Technical Education Leadership), Community College Teaching, Curriculum and Instruction (including program specializations in the following areas: Art Education, Early Childhood Education, Elementary Education, English Education, Instructional Leadership, Mathematics Education, Music Education, Science Education, Reading Education, and Social Studies Education), Educational Administration and Supervision, and Exceptional Student Education. Advisees for these programs may be obtained by calling the appropriate Department Office or by contacting the Coordinator of Doctoral Programs at (305) 348-3202. Detailed admission requirements, program descriptions, and graduation requirements may be obtained from doctoral program advisors in specific areas and by examining program descriptions in this catalog.

## North Miami Campus and Broward Program

The College of Education has programs of studies at the North Miami Campus and at the Broward Center on the Broward Community College Central Campus. Students interested in information regarding the North Miami Campus should call the College of Education at (305) 940-5820 or (305) 523-4422.

Students interested in information regarding the Broward program should call the College of Education at (305) 475-4156 or (305) 948-6747.

**Note:** State of Florida Teacher Certification, in addition to other criteria, requires all applicants to be fingerprinted and checked by the FBI. Some school districts also require a fingerprint check for student interns and/or student teachers. Students with a history of felony arrests may wish to consider this carefully, and seek advice from an advisor, before applying to programs in the College.

## Educational Leadership and Policy Studies

**Stephen M. Fain**, *Professor and Chairperson, Curriculum and Instruction*

**Carlos M. Alvarez**, *Associate Professor, International Development Education and Research*

**Kingsley Banya**, *Associate Professor, Curriculum and Instruction*

**Peter J. Clstone**, *Professor, Educational Leadership*

**Charles Divita, Jr.**, *Professor, Adult Education and Human Resource Development*

**Allen Fisher**, *Associate Professor, Educational Leadership*

**Paul D. Gallagher**, *Associate Professor, Educational Research, and Vice President, North Miami Campus*

**Lorraine R. Gay**, *Professor, Educational Research*

**Barry Greenberg**, *Professor, Educational Research, Community College Teaching*

**Loriana M. Novoa**, *Assistant Professor, Educational Research*

**Sarah W. J. Pell**, *Associate Professor, Educational Leadership*

**Douglas H. Smith**, *Associate Professor, Adult Education and Human Resource Development*

The Department of Educational Leadership and Policy Studies offers graduate programs in adult education and human resource development, curriculum and instruction, educational leadership and international development education. The department also provides research preparation for College of Education graduate programs. The department graduate programs and support services exist to enhance the College of Education's role of a professional school within the University. The graduate programs and services provide access and offer excellence in professional preparation of educational leaders, researchers, and planners. The programs serve students who focus on South Florida's urban challenges; State of Florida cultural, economic, and social development; national educational policy development; and international cultural, economic, and social development through education.

The department offers Master of Science degrees in Adult Education and Human Resource Development,

Educational Leadership, and International Development Education, the Specialist degree in Curriculum and Instruction and in Educational Leadership, and the Doctor of Education degree in Adult Education and Human Resource Development, Curriculum and Instruction, and Educational Administration and Supervision. The department also offers a Certificate in Educational Leadership for students who possess a graduate degree from an accredited institution of higher education and who seek State of Florida Certification in Educational Leadership. Specialties in elementary, middle, secondary, and higher education may be included in programs of study.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

## Master of Science Degree Programs in Adult Education

The Graduate Program in Adult Education and Human Resource Development (AE/HRD) is designed for the individual who chooses to serve as learning facilitator, training director, manager, curriculum developer and/or in adult education and human resource development. Graduates are working in AE/HRD programs in business and industry, public schools, hospitals, governmental agencies, community colleges, universities, civic organizations, military service, or other agencies. Graduate programs of study are designed in relation to an individual's specific interests, needs, and career goals.

The Department offers two master's degree programs in Adult Education: Adult Education: Human Resource Development and Administration and Supervision.

Adult Education: Human Resource Development is designed for persons interested in the design, implementation, evaluation, and management of human resource development programs. One half (15 hours) of the program is required, and the other half consists of elective courses selected by the advisor in relation to the student's career goals.



## Adult Education: Administration and Supervision

(For public school adult educators only)

### Required Program: (30)

#### Required Core: (18):

ADE 5081	Introduction to Adult Education and Human Resource Development	3
ADE 5180	Organizational/Community Processes in AE/HRD	3
ADE 5260	Organization and Administration of Adult Education and HRD Programs	3
ADE 5385	Adult Teaching and Learning	3
EDF 5481	Analysis and Application of Education Research	3
RED 6336	Teaching Reading in the Content Area	3

#### Area of Professional Emphasis: (12)

EDA 6061	Introduction to Educational Leadership	3
EDG 6250	Curriculum Development and Improvement	3
EDS 6050	Supervision and Staff Development	3
Advised Elective		3

## Adult Education: Human Resource Development (HRD)

### Required Program: (30)

#### Required Core: (15)

ADE 5081	Introduction to Adult Education and Human Resource Development	3
ADE 5180	Organizational/Community Processes in AE/HRD	3
ADE 5383	Instructional Processes in AE/HRD	3
ADE 5385	Adult Teaching and Learning	3
EDF 5481	Analysis and Application of Education Research	3
Advised Electives		15

The candidate, with the approval of the advisor, will select courses that will increase competence in a specific occupation/professional area.

## Master of Science in Educational Leadership

The Master of Science degree in Educational Leadership is awarded upon successful completion of all program requirements. The program consists of courses and experiences designed to

develop entry level competencies for persons seeking Florida certification in Educational Leadership. The program comprises the Florida Educational Leadership Core Curriculum and the competencies for high-performing principals identified by the Florida Council on Educational Management. Topics specific to non-public school administration may also be elected.

Admission to the program requires that the candidate meet criteria established by the Board of Regents for graduate study and other criteria established by the program faculty.

To become certified in Educational Leadership, formerly Administration and Supervision, all candidates must successfully complete the Florida Educational Leadership Core Curriculum and pass the Florida Educational Leadership Examination.

### Required Program: (36)

EDA 6061	Introduction to Educational Leadership	3
EDA 6192	Leadership in Education	3
EDA 6195	Communication in Educational Leadership	3
EDG 6250	Curriculum Development	3
EDA 6232	School Law	3
EDA 6242	School Finance	3
EDA 6503	The Principalship	3
EDA 6271C	Microcomputer Application for Administrators	3
EDA 6930	Seminar in Educational Leadership	3
EDF 5481	Analysis and Application of Educational Research	3
EDS 6115	School Personnel Management	3
Guided Electives		3

Six semester hours must be earned in one of the following areas: Early Childhood, Middle School, or Secondary School curriculum for state certification. The selection of courses to meet this requirement requires the approval of a faculty advisor.

## Master of Science in International Development Education

The Master of Science degree in International Development Education (IDE) is designed to provide graduate training to students interested in acquiring skills as specialists in educational development within the context of a changing society. The program places special emphasis on planning, management,

research, and evaluation skills. Such skills are developed in relation to a specific area of educational specialization and with a special emphasis on understanding the influence of the social context of education on educational development and change.

### Admission Requirements

To be admitted into the Master's degree program in International Development Education (IDE), a student must: (a) hold a Bachelor's degree from an accredited institution or its equivalent for international students; (b) have a 3.0 GPA or higher during the last 60 semester hours of undergraduate study (or its equivalent for foreign students); and/or (c) have a combined score (verbal and quantitative) of 1000 or higher on the GRE (students must submit the GRE scores regardless of their GPA or degree); and/or (d) have a graduate degree from an accredited institution of higher learning; (e) in the case of foreign students whose first language is other than English, a minimum score of 500 on the TOEFL examination is also required; (f) submit two letters of recommendation, preferably from persons in the academic community who are familiar with the applicant's record and who are able to evaluate the applicants' background, professional interest, and career goals; (g) submit a short essay of approximately 250 words concerning the applicants' background, professional interests and goals in the area of International Development Education.

### Degree Requirements

The Master's program requires the completion of a minimum of 36 semester hours of coursework at the graduate level with a 3.0 GPA. A maximum of six semester hours of graduate work may be transferred to the program from other universities. The 36 semester hours are to be completed in accordance with the program curriculum.

### Language Requirement

The student must demonstrate competency in the use of a modern language, other than English, prior to graduation. International students may demonstrate competency in their native language. Language courses will not count for credit toward program completion.

### Required Program: (36)

#### Social Context of Education and Development: (6)

EDF 5850	International Development Education: Historical
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- and Contemporary Reality 3
- EDF 5852 Educational Development Issues in Context: A Multidisciplinary Perspective 3

### **Educational Research and Evaluation Methods: (3)**

- EDF 5481 Analysis and Application of Educational Research 3
- EDF 5432 Methods and Evaluation 3

### **Educational Policy, Planning, Implementation/Management and Evaluation Skills: (12)**

- EDF 6654 Macro- and Micro-Planning in Education 3
- EDF 6651 International Development Education: Educational Technology, Planning and Assessment 3
- EDF 6656 International Development Education: Innovative Approaches in Educational Planning 3
- EDF 6658 Selected Topics: International Development Education, Current Policy Issues and Problems 3
- Independent Study 3
- EDF 6972 Thesis in International Development Education 3

### **Dual Specialties: (12)**

The student will select, with advisor's permission, a minimum of six semester hours from courses available in one of the following areas:

1. A content area of educational specialization;
2. Comparative/Intercultural Education;
3. System's consultation;
4. Socioeconomic and political context of development;
5. Courses in any other area of special interest to the student.

### **Educational Specialist**

The Educational Specialist program in Educational Leadership is designed to build upon the educator's master degree preparation and professional experience. The degree may include coursework that prepares them for state certification in Educational Leadership. Program descriptions may be ob-

tained from the program leader (305-348-3221).

### **Admission Requirements**

Applicants must hold a current regular Florida teaching certificate or possess such prior to award of the degree. A 3.0 GPA in the last 60 semester hours of undergraduate study or a 3.5 GPA in the master's program from an accredited university and 1000 on the Graduate Record Examination (GRE), verbal and quantitative scores, are required. Further, an interview with program faculty and two recommendations are required.

## **Doctor of Education Degree Programs**

### **Adult Education and Human Resource Development (HRD)**

The doctoral program in Adult Education and Human Resource Development (HRD) is designed to serve the advanced graduate study needs of a wide range of professionals in leadership positions who are concerned with the design, implementation, and evaluation of educational and training programs for adults. These professionals may be engaged in program development and evaluation, instruction and training, counseling and advisement, consultation, and marketing and recruitment activities designed to further the growth and development of adult learners or to improve organizational functioning through educationally-related intervention strategies, or both. Accordingly, participants in the program come from such diverse backgrounds as business and industry, higher education, public and proprietary schools, health and social service agencies, law enforcement and corrections, the military, governmental agencies, religious organizations, libraries and museums, and civic and professional associations.

### **Admission Requirements**

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

The data from applicants is reviewed by an admissions committee. The criteria applied in reviewing the

applicant's files are noted below. Exceptions to one or more of the criteria may be granted provided the applicant has excelled in certain off-setting assessment areas.

1. 3.0 GPA in the last two years of undergraduate work;
2. 3.25 in all graduate work attempted;
3. A master's degree from an accredited institution or equivalent preparation;
4. A score of at least 1000 on the general aptitude portion of the GRE;
5. Evidence of commitment to a career in the broad field of Adult Education and HRD;
6. Successful professional experience in the field of Adult Education and HRD;
7. Potential for leadership or research in the field, or both.

### **Program of Study**

Doctorate programs of study vary according to the individual needs of the participants and their current or anticipated professional goals. A typical program will require a minimum of 101 semester hours beyond the baccalaureate degree and will involve the categories of courses noted below. The list should be considered as a sample program rather than an absolute delineation of exact requirements. Actual programs are planned by the participants, their major professor, and doctoral committee.

### **Required Core (18-24)**

Adult Education and HRD includes such courses as comprehensive Adult Education and HRD planning, program development, instructional design, adult teaching and learning, Adult Education and HRD trends and issues, strategies, and research.

### **Elective Core (9-15)**

Elective Core varies according to the participants' background and professional goals.

### **Research and Statistics (12)**

### **Prospectus and Dissertation (24)**

## **Community College Teaching**

The doctoral program in Community College Teaching is designed to provide the opportunity for specially selected students to enhance instructional and research skills related to the continuing development and operation of the community college. The program is offered in a format to make it attractive and available to place

bound professionals in Southeast Florida. The program is designed to stimulate research related to the community college, particularly in the development of innovative instructional approaches.

### Admission Requirements

The requirements for admission consist of a master's degree from an accredited university; combined quantitative and verbal scores of 1000 on the GRE; a score at the 50th percentile or higher on the appropriate subject test of the GRE; a 3.25 GPA on all post-baccalaureate work, a departmental interview, and acceptance by the department of the instructional field.

### Admission Requirements

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

### Program of Study

Post-baccalaureate coursework minimum requirements for the degree, while subject to individual variations, consist of the following:

### Community College/Higher Education Core: (20)

EDH 7065	Higher Education: Philosophical and Historical Perspectives	3
EDH 7204	Higher Education: Community College	3
EDH 7307	Higher Education: Instructional Methods	4
EDH 7225	Higher Education: Developmental Programs	3

Additional courses in Education that will enhance the student's instructional abilities and skills. 7

### Instructional Field Specialty Area: (30)

The instructional field consists of 30 graduate hours related to the subject which is or will be taught in the community/junior college.

### Cognate Area: (16)

The cognate area may be taken in one or more subject areas and may include graduate or undergraduate (post-baccalaureate) courses. The design of the cognate should assist the student in developing into a well-rounded community

college teacher, one who is able to adapt to changing conditions of instruction.

### Research and Statistics: (12)

The research and statistics requirement is to assist the student in expanding the capacity to use research related to instruction.

### Dissertation: (24)

The dissertation should be on a topic of importance to higher education and should reflect the student's professional interests and goals.

Previous graduate course work, including work completed as part of a master's degree program may be applied toward the doctoral program requirements.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

### Curriculum and Instruction

The doctoral program in Curriculum and Instruction offers specialties in the following areas: Art Education, Early Childhood Education, Elementary Education, English Education, Instructional Leadership, Mathematics Education, Music Education, Science Education, Reading Education, and Social Studies Education.

### Admission Requirements

Criteria for admission to the Doctoral Program include the following:

1. A master's degree from an accredited institution.
2. A satisfactory grade point average (at least 3.25) in all prior graduate work.
3. A satisfactory grade point average (at least 3.0) in the last 60 semester hours of undergraduate work.
4. A combined score of 1000 (verbal and quantitative) on the Graduate Record Examination (GRE).
5. In the case of foreign students, a TOEFL score of at least 500 and a score of at least 470 on the verbal portion of the GRE.
6. Career goals in professional education consistent with the objectives of a doctoral program.
7. Appropriate prior work experience.

8. A personal interview with a committee of program faculty.

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation that support the application.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

Final decisions on admission are made by the Faculty Admissions Committee. Having met the minimum criteria stated above does not assure admission to the program. Additional information can be obtained from the Coordinator of Doctoral Programs, DM 255.

### Core Courses: (15)

EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3
EDF 7934	Seminar in Social Foundations of Education	3
EDF 6211	Psychological Foundations of Education	3

### Specialty Area: (36)

The specialty areas include art education, early childhood education, elementary education, English education, instructional leadership, mathematics education, music education, reading education, science education, and social studies education.

### Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of coursework in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

### Research and Statistics: (12)

### Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the College and to the Dean of Graduate Studies.

### Dissertation

The student is responsible for 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

EDG 7980 Doctoral Dissertation 6-9

### Educational Administration and Supervision

The doctoral program in Educational Administration and Supervision is designed for students who wish to pursue leadership roles in educational institutions. Among those roles are principals, supervisors, directors, and superintendents of public and independent schools; state, federal, and international agency administrators and staff; and research and development personnel. The curriculum is designed to enable students to become familiar with and utilize effectively both theoretical and technical knowledge. The program of study is multidisciplinary and integrates broad intellectual perspectives into the study and practice of Educational Leadership.

### Admission Requirements

The minimum admission requirements are as follows:

1. A master's degree from an accredited institution.
2. A 3.0 GPA in the last 60 hours of undergraduate work.
3. A 3.25 GPA in prior graduate work.
4. A combined score of 1000 on the GRE (verbal and quantitative).

5. Evidence of three years or more of successful and appropriate professional experience.

6. Three letters of recommendation to support the application for admission.

7. A statement that sets forth the applicant's career goals and relates those goals to the completion of the doctoral program.

8. In the case of a foreign student, a TOEFL score of at least 500 and a score of at least 470 on the verbal portion of the GRE.

9. An interview with program faculty that utilizes targeted selection methods.

10. Recommendation by the program faculty.

### Program of Study

The program requires the completion of a minimum of 99 semester hours of academic work beyond the baccalaureate degree. Program requirements include the following:

Required Core Courses	18
Guided Electives in Educational Administration and Supervision	15
Minor/Cognate Area	15
Research and Statistics	12
Dissertation	24

Upon completion of the coursework, each student must pass a candidacy examination and be advanced to candidacy.

The doctoral dissertation is the final component of the series of academic experiences that culminate in the awarding of the Ed.D. degree. A successful dissertation is a demonstration of the candidate's ability to use the tools and methods of basic or applied research in the field, or both, to organize the findings, and to report them in a literate, logical, and compelling fashion. The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

More specific information concerning the doctoral program is available from faculty members in the program area.

### Research and Statistics Component of Doctoral Programs

A research requirement of 12 semester hours is common to all College of Education doctoral programs.

### Required Courses:

EDF 5481	Analysis and Application of Educational Research	3
EDF 6486	Research Methods in Education: Experimental Design and Analysis	3

### One of the following:

EDF 6403C	Quantitative Foundations of Educational Research	3
EDF 6475	Qualitative Foundations of Educational Research	3

### Professional Certificate Program in Adult Learning Systems

The professional certificate in adult learning systems is a comprehensive and integrated university-based option to provide professionals with skills and training for adult education programs. The non-degree certificate program may be pursued in conjunction with a bachelor's or master's degree; or beyond the bachelor's or master's degree; or independent of the pursuit of a degree. The latter option is for persons having special responsibilities and experiences in the field of Adult Education and Human Resource Development.

### Required Program: (20)

ADE 5925	Workshop in Adult Education and Human Resource Development	1-6
ADE 5385	Adult Teaching and Learning	3
ADE 5180	Organizational and Community Processes in AE/HRD	3
ADE 5383	Development of Adult Education and HRD Programs II	3
ADE 5935	Special Topics in Adult Education and Human Resource Development	1
ADE 6930	Seminar in Adult Education and Human Resource Development	1-3

To be admitted to the program the student must:

1. Hold or be seeking a bachelor's or master's degree from an accredited institution;
2. Have submitted three letters of recommendation describing ability to engage in and profit from such a program of studies;

3. Submit a personal statement of interests and goals which relate to Adult Education and Human Resource Development.

Applicants will develop a project or problem-oriented learning contract during the initial workshop to be pursued throughout the program. Contracts will be refined as the student progresses through the first part of the program of studies. The culminating activity, the Seminar, ADE 6930, will require the student to complete, share, and evaluate the tasks and activities within the individual learning contract.

## Professional Certificate Program in Educational Leadership

The objectives of the certificate are to meet the requirements of SBE 6A-4.082 (5) C which requires a modified core Florida Educational Leadership program; and to assist professional educators in meeting the State requirements for certification in Educational Leadership.

### Required Courses: (24)

EDA 6192	Leadership in Education	3
EDA 6195	Communication in Educational Leadership	3
EDA 6232	School Law	3
EDA 6242	School Finance	3
EDA 6271C	Administration and Application of Computers	3
EDA 6503	School Principalship	3
EDS 6050	Supervision and Staff Development	3
	or	
EDS 6115	School Personnel Management	

## Educational Psychology and Special Education

- Donald C. Smith, Professor and Chairperson, Educational Psychology/School Psychology, Counselor Education**
- Wendy Cheyney, Associate Professor, Learning Disabilities**
- Marisal Gavilan, Associate Professor, Educational Psychology/Bilingual Education**
- Daniel A. Kennedy, Associate Professor/School Counseling, Educational Psychology**
- Philip J. Lazarus, Associate Professor, School Psychology, Educational Psychology**
- Luretha F. Lucky, Associate Professor, Mental Retardation**
- David E. Nathanson, Professor, Gifted Education and Mental Retardation**
- Howard Rosenberg, Associate Professor, Mental Retardation**
- Stephen S. Strichart, Professor, Learning Disabilities**
- Jethro W. Toomer, Professor, Community Mental Health Counseling**
- Judith Walker, Assistant Professor, Counselor Education, Educational Psychology**
- The Department offers a variety of programs to prepare counselors to work in school and community settings, psychologists to work in the schools, and teachers of emotionally disturbed, gifted, learning disabled, and mentally retarded students. All programs require substantial supervised fieldwork. State of Florida certification requirements are met for all programs preparing school personnel.

### Master of Science

- Community Mental Health Counseling
- Diagnostic Teaching: Emotional Disturbance
- Diagnostic Teaching: Mental Retardation
- Diagnostic Teaching: Specific Learning Disabilities
- School Counseling

### Educational Specialist

- School Psychology

### Doctor of Education

- Exceptional Student Education

## Master of Science Degree Programs

### Educational Psychology

Programs within the field of Educational Psychology are designed to train professionals to meet the unique needs of individuals who experience cognitive, academic, and/or social-emotional difficulties that interfere with the individual's progress in school and in the community. Specific competencies are delineated for professionals in the field of school counseling, community mental health counseling, and school psychology.

These programs emphasize the blending of research and theory with practical applied experience. They consider the urban, multi-cultural nature of the community, as well as more general trends within specific fields. All programs involve extensive field work with accompanying seminars. Independent study courses are available to allow students to pursue specialized interests and needs.

Applicants are required to submit an application to the Office of Admissions. All applicants must present GRE scores for the Verbal and Quantitative sections, three letters of recommendation (at least one from academic sources and one from work or volunteer experience), and an autobiographical statement. Candidates are admitted by action of the Department's Graduate Admissions Committee. Criteria for program acceptance include GRE scores, undergraduate grade point average during junior and senior years, work and volunteer experience, quality and source of letters of recommendation, and the candidate's career aspirations and goals. A combined Verbal-Quantitative GRE score of 1000 and/or GPA of 'B' or higher during the undergraduate junior and senior years (i.e. last 60 semester hours), or both, are required for a candidate to be admitted via regular procedures.

GRE scores must have been attained within a three year period prior to the time of admission. Students may transfer a maximum of nine semester hours earned at another institution into the program provided the course work taken does not exceed a three year time period. Students are allowed a maximum of four years from the date of initial enrollment to complete program requirements. Periods of noncontinuous enrollment do not count against the four year period provided a "Request for program Interruption" is approved by the Graduate Admissions Committee.

Given the unique nature of the field of counselor preparation requiring mastery of cognitive skills and demonstration of relevant and appropriate interpersonal skills, the faculty retains the right to "counsel out" of the program and/or not recommend for internship placement any student whose level of interpersonal competence is considered incompatible with that required for effective functioning as a counseling practitioner.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

All programs preparing school personnel are approved by the State of Florida and allow students completing the program to be eligible for certification by the State.

### Counselor Education Tracks

The counselor education tracks require 60 semester hours, or the equivalent of four academic semesters, and lead to the Master of Science degree. The tracks follow a competency based model, the early part of which is largely generic in nature and is concerned with the development of knowledge and skills in the areas of individual and group counseling, consultation, preventive mental health, educational-vocational development, client appraisal, systems intervention, and model program organization and evaluation. The latter part of the program is more differentiated, and enables a specialization in either community mental health or school counseling. Both areas of specialization meet the standards recommended by the American Association for Counseling and Development and specialization in school counseling qualifies the graduate for the Florida School Guidance Certificate. The Community Mental Health Counseling curriculum meets the master's degree requirement for eligibility towards licensure as a mental health counselor by the State of Florida.

The prospective student should be advised that a substantial amount of time is spent in field work to meet practicum and internship requirements. The practicum requirement is the equivalent of one work day per week spent in a field placement during one academic semester followed by an internship consisting of a 40 hour work week in a field placement for the duration of one academic semester. The student

should plan for this field work to be during the day, rather than during evening hours.

All students entering the School Counseling track with an undergraduate degree in an area other than education must enroll for courses in general professional education as required by the Florida State Department of Education in order to meet state certification requirements in Florida.

Students applying to the Community Mental Health Counseling program with an out-of-field undergraduate major must complete 18 hours of prerequisite coursework.

### Community Mental Health Counseling

#### Required Program: (60)

##### First Year: (27)

EGC 6605	Professional Problems in Counseling	3
EGC 5405	Introduction to Counseling	3
EGC 6725	Human Interaction I: Group Process and Social Behavior	3
EGC 6707	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
EGC 6726	Human Interaction II	3
EDF 5481	Analysis and Application of Educational Research <sup>1</sup>	3
EGC 6708C	Advanced Counseling and Consultation: Theory and Practice	3
EGC 6203	Appraisal and Measurement in Counseling	3
EGC 5305	Educational-Vocational Counseling	3

##### Second Year: (33)

EGC 6616	Program Evaluation in Counseling & School Psychology	3
EGC 6822	Advanced Practicum in Counseling and Consultation	3
EGC 6676	Supervised Field Experience Counseling	1-10
EGC 6709	Organizational Consultation: Human Interaction III	3
EGC 6936	Special Topics in Counseling and School Psychology	3

EGC 6469	Counseling the Culturally Different	3
Advised Electives		8

<sup>1</sup>Students should consult with program advisor regarding courses required by the Department of Professional Regulation for certification eligibility as a Mental Health Counselor.

### School Counseling

#### Required Program: (60)

##### First Year: (27)

EGC 6605	Professional Problems in Counseling	3
EGC 5405	Introduction to Counseling	3
EGC 6725	Human Interaction I: Group Process and Social Behavior	3
EGC 6707	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
EGC 6726	Human Interaction II	3
EDF 5481	Analysis and Application of Educational Research	3
EEX 6051	Exceptional Children and Youth	3
EGC 6203	Appraisal and Measurement in Counseling	3
EGC 5305	Educational-Vocational Counseling	3

##### Second Year: (33)

EGC 6616	Program Evaluation in Counseling and Education	3
EGC 6708C	Advanced Counseling and Consultation: Theory and Practice	3
EGC 6822	Advanced Practicum in Counseling and Education	3
EGC 6676	Supervised Field Experience in Counseling	1-10
EGC 6469	Counseling the Culturally Different	3
EGC 6936	Special Topics in Counseling and School Psychology	3
Advised Electives		8

### School Psychology

The program in School Psychology requires 65 semester hours and leads to State of Florida certification as a specialist in School Psychology as well as educational requirements for private licensure. This program leads to the Edu-

cational Specialist Degree. Program descriptions may be obtained in the departmental office (305) 348-2552.

The competencies to be demonstrated by the student completing this program are derived from the following: behavioral/educational assessment and planning; counseling and child-centered consultation with teachers, parents, and agency representatives; staffing, liaison, referral, and case management; program development and evaluation; in-service education; administrative consultation; and community development.

#### Required Program: (65)

EDF 5481	Analysis and Application of Educational Research	3
EDF 6211	Psychological Foundations of Education	3
EGC 5405	Introduction to Counseling	3
EGC 6725	Human Interaction I: Group Process and Social Behavior	3
EGC 6726	Human Interaction II	3
EGC 6707	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
EGC 6708C	Advanced Counseling and Consultation: Theory and Practice	3
EEX 6227	Diagnostic Teaching: Educational Assessment	3
EEX 6208	Medical Aspects of Disability	3
EEX 6912	Advanced Theory and Research in Special Education	3
SPS 6805	Professional Problems and Issues in School Psychology	3
SPS 6191	Psycho-Educational Assessment I: Intellectual	3
SPS 6191L	Psycho-Educational Assessment I: Lab	3
SPS 6192	Psycho-Educational Assessment II: Process	3
SPS 6192L	Psycho-Educational Assessment II: Lab	3
SPS 6193	Psycho-Educational Assessment III: Behavior	3
SPS 6193L	Psycho-Educational Assessment III: Lab	3
EGC 6616	Program Evaluation in Counseling and School Psychology	3

EGC 6678	Supervised Field Experience School Psychology	10
EGC 6936	Special Topics in Counseling and School Psychology	3
Electives		3-6

The student is required to enter an internship in School Psychology under the supervision of a field based school psychologist for a period of 1200 clock hours. This internship is a full-time, eight hour day, five day week involvement and students entering the program should plan for it during the final stage of their training. At least 600 hours of the internship must be in a setting from kindergarten to grade 12 in a public school. Other approved internship experiences may include private state approved educational programs or other appropriate mental health-related programs or settings for the education of children and youth.

All students entering the School Psychology track with an undergraduate degree in an area other than education must enroll for the courses in general professional education required to meet certification requirements in the State of Florida. All applicants must also complete 15 hours of prerequisite coursework in psychology.

### Special Education

The Department offers master's degree programs that prepare individuals to teach exceptional children and youth. Emphasis is given to the development of skills in assessment, prescriptive programming, behavior management, consultant and group leadership skills.

Program applicants are required to submit an application to the Office of Admissions. All applicants must present GRE scores for the Verbal and Quantitative sections, three letters of recommendation (at least one from academic sources and one from work or volunteer experience), and an autobiographical statement. Candidates are admitted by action of the Department's Graduate Admissions Committee. Criteria for program acceptance include GRE scores, undergraduate grade point average during the junior and senior years, work and volunteer experience, quality and source of letters of recommendation, and the candidate's career aspirations and goals. A combined Verbal-Quantitative GRE score of 1000 and/or GPA of 3.0 or higher, during the undergraduate junior and senior years is required for a candidate to be admitted via regular procedures. Applicants who do not hold

a valid Florida Teaching Certificate must complete all requirements for certification in addition to degree requirements.

Programs are offered in Exceptional Student Education: Diagnostic Teaching (Mental Retardation, Emotional Disturbance, and Specific Learning Disabilities). All programs are approved by the State of Florida and allow students completing the program to be eligible for certification by the State. Courses leading to certification in the areas of the Gifted are also offered.

### Exceptional Student Education: Diagnostic Teaching

The major competencies of the diagnostic teacher are an extension and refinement of those developed by the student in the undergraduate special education curriculum: a) Assessment of learning styles through observation and on-going monitoring techniques; b) application of behavioral approaches to the building, monitoring and remediation of classroom behavior; c) communication of information concerning children to others within the school and to parents, consultation skills; d) curriculum planning and innovation including staffings and IEP; e) supervision of special education units; f) consultation skills.

Professional Certificate programs are available in a number of specialized areas. Consult the program faculty for further information.

### In-Field Majors

The following program of study is for the student who holds an undergraduate degree in Special Education from Florida International University. A student with an undergraduate major in Special Education from another institution must plan a program with an academic advisor to ensure having the entry skills for this program.

#### Required Program: (36)

EDF 5481	Analysis and Application of Educational Research	3
EEX 6060	Curriculum Planning and Development	3
EEX 6227	Assessment of Behavior	3
EEX 6211	Assessment of Learning and Behavior	3
EEX 6535	Seminar in Special Education: School Administration	3
EMR 6852	Advanced Theory and Practice: Mental Retardation	3

ELD 6323	Advanced Theory and Practice: Specific Learning Disabilities	3
EED 6226	Advanced Theory and Practice: Emotional Handicaps	3
EEX 6846	Diagnostic Teaching: Advanced Practicum	3
EEX 6771	Independent Living and the Handicapped or	3
EEX 6250	Reading for Exceptional Learners	6
Electives		6

### Out-of-Field Majors

A student eligible for or holding a Florida teaching certificate in other areas of education should consult with an academic advisor for evaluation of entry competencies to the program. If entry competencies cannot be demonstrated either on the basis of course equivalents or work experience, the student will be asked to complete one or more of the following courses in addition to those listed above for In-Field Majors.

EEX 3221	Assessment of Exceptional Children	3
EMR 4251	Educational Planning for the Mentally Retarded or	3
ELD 4230	Curriculum for the Learning Disabled or	
EED 4227C	Educational Planning for Emotionally Handicapped	
EEX 6051	Exceptional Children and Youth	3
EEX 4601	Behavioral Approaches to Classroom Learning	3
EEX 4611	Behavioral Analysis II	3
EEX 6106	Diagnostic Teaching: Acquisition of Language and Reading Skills	3
EEX 4861	Student Teaching	12

A student who does not hold nor is currently eligible for a Florida Teaching certificate must also complete all certification requirements as stipulated by the State Department of Education.

### Doctor of Education in Exceptional Student Education

The Doctoral Program in Exceptional Student Education offers specialties in the following areas: Administration; Curriculum Development; and Research.

### Admission Requirements

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

Students applying for the doctoral program must have a Master's degree GPA of at least 3.25, and a combined GRE score of at least 1000 on the verbal and quantitative sections, three years of appropriate experience with exceptional individuals, a Bachelor's or Master's Degree in Exceptional Student Education or related area.

Applicants who do not hold a Master's degree must have a GPA of at least 3.0 during the undergraduate junior and senior years (i.e. last 60 semester hours).

The program components are as follows:

#### Special Education Core: (15)

EEX 6937	Seminars in Special Education	3
EEX 6208	Medical Aspects of Exceptionality	3
EEX 6301	Research in Cognitive Processes of Handicapped Students	3
EEX 6203	Advanced Psycho-Social Aspects of Exceptionality	3
EEX 6535	Seminar in Special Education School Administration	3

#### Specialty Area: (30)

Exceptional Student Education and/or related area (can be satisfied by appropriate master's level work).

#### Cognate Area: (15)

The cognate area requires a minimum of 15 semester hours in one of the following career thrusts: special education administrator; special education curriculum specialist; special education researcher.

#### Research and Statistics: (12)

##### Required Courses:

EDF 5481	Analysis and Application of Educational Research	3
EDF 6486	Research Methods in Education:	

Experimental Design and Analysis	3
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#### One of the following:

EDF 6403	Quantitative Foundations of Education	3
EDF 6475	Qualitative Foundations of Educational Research	
Electives		12

Additional courses in the area of the student's interests as determined by the student and his or her Program of Study Committee.

### Candidacy Examinations and Advancement to Candidacy

The student may be admitted to candidacy for the degree after the following conditions have been met:

- a. Residency requirement
- b. Successful completion of Candidacy Examination
- c. Recommendation of the Program of Study Committee
- d. Approval of a dissertation topic by the student's Dissertation Committee.

#### Dissertation: (EEX 7980)

The student is responsible for 24 or more semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in exceptional student education. The student is expected to complete the dissertation within five years from the date of advancement to candidacy. A minimum of six credit hours of dissertation credit are required once the dissertation is started.

### Certificate and Add-On Certification Programs

#### Professional Certificate Program in Specific Learning Disabilities, Emotional Disturbance, and Mental Retardation<sup>1</sup>

In order to meet the needs of teachers not wishing to enter a Master's Degree program, but who wish to complete state certification in a sequential and planned program of study, the University has established three Professional Certificate Programs: Specific Learning Disabilities, Emotional Disturbance, and Mental Retardation. The entrance requirement is eligibility for or possession of a Florida Teaching Certificate in elementary education.



In the event a student enrolled in the Professional Certificate Program elects to apply course work taken toward meeting the requirements for a Master of Science Degree, the student must follow the stipulated entrance procedures for the Master's Degree program.

<sup>1</sup>These programs are being revised as of July 1, 1992 to meet the new State of Florida certification requirements. See the Department for specific changes.

### Specific Learning Disabilities

EEX 6051	Exceptional Children and Youth	3
EEX 6106	Diagnostic Teaching: Acquisition of Language and Reading Skills	3
EEX 6227	Diagnostic Teaching: Educational Assessment	3
EEX 4601	Behavioral Approaches to Classroom Learning	3
EEX 6211	Assessment of Learning and Behavior	3
ELD 6323	Advanced Theory and Practice: Specific Learning Disabilities	3
ELD 4230	Curriculum for the Learning Disabled	3

### Emotional Disturbance

EEX 6051	Exceptional Children and Youth	3
EEX 6106	Diagnostic Teaching: Acquisition of Language and Reading Skills	3
EEX 6227	Diagnostic Teaching: Educational Assessment	3
EEX 4601	Behavioral Approaches to Classroom Learning	3
EEX 4611	Behavioral Approaches to Classroom Learning II	3
EED 4227	Educational Planning for Emotional Handicaps	3

### Mental Retardation

EEX 6051	Exceptional Children and Youth	3
EEX 6106	Diagnostic Teaching: Acquisition of Language and Reading Skills	3
EEX 6227	Diagnostic Teaching: Educational Assessment	3
EMR 4251	Educational Planning for the Mentally Retarded	3
EMR 6852	Advanced Theory and Practice for the Mentally Retarded	3

EEX 6771 Independent Living for the Handicapped 3

### Program for Guidance Certification

To provide a systematic curricula as a means of obtaining the Florida Guidance Counselor (PK-12) Certificate for those who already possess a master's degree in Education and do not wish to pursue a second master's degree.

### Entrance Requirements

Application for admission is to be made to the Department of Educational Psychology Graduate Admissions Committee. The criteria for admissions includes: possession of a master's degree in Education or other approved area, transcripts of all college credits, autobiographical form, and three letters of recommendation.

### Required Program: (33)

EGC 6605	Professional Problems in Counseling	3
EGC 6203	Measurement and Appraisal in Counseling	3
EGC 5305	Educational-Vocational Counseling	3
EGC 6707	Behavioral and Cognitive Modification Techniques in Counseling and Education	3
EGC 6936	Special Topics in Counseling and School Psychology	3
EDF 6211	Psychological Foundations of Education	3
EGC 5405	Introduction to Counseling	3
EGC 6725	Human Interaction I: Group Process and Social Behavior	3
EGC 6540	Group Counseling	3
EGC 6708C	Advanced Counseling and Consultation: Theory and Practice	3
EGC 6784	School Law for Student Service Workers	3
EGC 6469	Counseling the Culturally Different	3
EGC 6822	Advanced Practice in Counseling and Consultation (Prerequisite: all the courses listed above)	3

*Note:* At the discretion of the program coordinator, a minimum of six semester hours of transfer credit may be used to satisfy these requirements.

## Elementary Education

- Allcia Mendoza, Associate Professor and Chairperson, Early Childhood/Elementary Education
- John Bath, Assistant Professor, Science, Mathematics, and Elementary Education
- Toni Blibao, Associate Dean, Elementary Education
- Victoria J. Dimidjian, Professor, Early Childhood Education
- Mohammed K. Farouk, Assistant Professor, Social Studies Education
- Joyce C. Fine, Assistant Professor, Reading and Language Arts Education
- Robert K. Gilbert, Associate Professor, Mathematics Education
- Sharon W. Kossack, Professor, Reading Education
- Nancy Marshall, Associate Professor, Reading and Language Arts Education
- Grover C. Mathewson, Associate Professor, Reading and Language Arts Education
- Lynne Miller, Assistant Professor, Reading and Language Arts Education
- George S. Morrison, Professor, Early Childhood Education and Urban Education
- Edward M. Reichbach, Associate Professor, Social Studies Education
- Robert F. Testa, Associate Professor, Music Education

The department offers programs in elementary, early childhood, and reading education. The elementary education program may be taken at the bachelor's, master's, or doctoral levels. The early childhood and reading programs offer master's and doctoral degrees only.

The department is committed to service to the community and the extension of knowledge through research. The department's programs are:

### Master of Science in:

- Early Childhood Education
- Elementary Education
- Reading Education

### Doctor of Education specialties in Curriculum and Instruction degree in:

- Early Childhood Education
- Elementary Education
- Reading Education

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission require-

ments are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

## Master of Science in Early Childhood Education

Applicants for admission to the Master's program in Early Childhood Education must hold or qualify for Florida certification or equivalent in early childhood education (including practical teaching experience requirement), and must satisfy requirements for scholastic aptitude as determined by the graduate admissions standards: GPA of 3.0 or 1000 on GRE. Applicants must submit GRE scores.

### Required Program: (36)

EDE 6205	Curriculum Design for Childhood Education	3
EDF 5432	Measurement and Evaluation in Education	3
EDF 5481	Analysis and Application of Educational Research	3
EEC 6261	Education Programs for Younger Children	3
RED 6305	Instruction in Early Childhood Reading	3
MAE 6305	Instruction in Early Childhood Mathematics	3

### Specialization Courses

Courses to be selected from among Early Childhood course listings, in consultation and with approval of advisor 18

## Master of Science in Elementary Education

Applicants for admission to the Master's program in Elementary Education must: hold or qualify for Florida certification or equivalent in elementary education (including practical teaching experience requirement), and satisfy requirements for scholastic aptitude as determined by the graduate admissions standards: GPA of 3.0 or 1000 on GRE. The applicants must submit GRE scores.

### Required Program: (36)

EDE 6205	Curriculum Design for Childhood Education	3
EDE 6225	Educational Program for Older Children	3
EDF 5432	Measurement and Evaluation in Education	3
EDF 5481	Analysis and Application of Educational Research	3

RED 6155	Instruction in Elementary Reading	3
MAE 6318	Instruction in Elementary Mathematics	3

### Specialization Courses

Courses to be selected from among Elementary courses only in consultation and with approval of advisor. 18

## Master of Science in Reading

The Master of Science in Reading develops competencies in diagnosis and remediation, teaching of reading K to 12, and administration and supervision of remedial, corrective, developmental, and content area reading programs. The graduate is competent to take leadership in improving reading instruction and preventing reading failure in schools or clinics.

Requirements for admission to the Master's program in Reading Education are completion of an appropriate undergraduate teacher education program, satisfactory scholastic aptitude, as determined by the graduate admission standards a GPA 3.0 or 1000 on the GRE; applicants are required to submit GRE scores. Applicants must have taught for a minimum of three years prior to receiving the Master's degree in Reading.

### Standard Track

This master's track is designed to meet the needs of students interested in reading assessment and instruction. This track and the thesis track both lead to state certification.

### Required Program: (21)

EDE 6205	Curriculum Design for Childhood Education or Curriculum Development	3
EDG 6250	Curriculum Development	
EDF 5432	Measurement and Evaluation in Education	3
EDF 5481	Analysis and Application of Education Research	3
RED 6155	Instruction in Reading	3
RED 6336	Reading in the Content Area	3
RED 6515	Programs of Remediation in Reading	3
RED 6546	Diagnosis of Reading Difficulty	3

### Specialization Courses: (15)

Courses to be selected from among Reading or Language Arts course listings, in consultation and with approval of advisor.

EEX 5250	Reading for Exceptional Students	3
LAE 5415	Children's Literature	3

LAE 6355	Instruction in Language Arts	3
RED 5447	Analysis and Production of Reading Materials	3
RED 5448	Reading by Computer	3
RED 5911	Individual Study in Reading	3
RED 5925	Workshop in Reading Education	3
RED 6247	Organization and Supervision of Reading Programs	3
RED 6747	Research in Reading	3
RED 6805	Practicum in Reading	3
RED 6845	Clinical Process in Reading	3
RED 6931	Seminar in Reading Education	3
RED 6932	Special Topics in Reading	3

### Thesis Track

This master's track is designed to meet the needs of students interested in pursuing independent research and provides a special foundation for doctoral degree program entrance. Admission requirements for this program are the same as for the regular Master's degree program.

### Required Program: (33)

EDE 6205	Curriculum Design for Childhood Education or Curriculum Development	3
EDE 6250	Curriculum Development	
EDF 5432	Measurement and Evaluation in Education	3
EDF 5481	Analysis and Application of Educational Research	3
RED 6155	Instruction in Early Childhood Reading	3
RED 6336	Reading in the Content Area	3
RED 6515	Programs of Remediation in Reading	3
RED 6546	Diagnosis of Reading Difficulty	3
RED 6747	Research in Reading	3
RED 6931	Seminar in Reading Education	3
RED 6971	Thesis in Reading Education	6

### Specialization Course: (3)

Complete one reading or language arts course in consultation with advisor:

RED 5447	Analysis and Production of Reading Materials	3
RED 5448	Reading by Computer	3
RED 6247	Organization and Supervision of Reading Programs	3
RED 6805	Practicum in Reading	3

RED 6845	Clinical Procedures in Reading	3
RED 6932	Special Topics in Reading	3

## Doctor of Education in Curriculum and Instruction

The Department offers Curriculum and Instruction doctoral specialties in Early Childhood Education, Elementary Education and Reading Education.

### Admission Requirements

Criteria for admission to the Doctoral Program include the following:

1. A master's degree from an accredited institution.
  2. A satisfactory grade point average (at least 3.25) in all prior graduate work.
  3. A satisfactory grade point average (at least 3.0) in the last 60 semester hours of undergraduate work.
  4. A combined score of 1000 (verbal and quantitative) on the Graduate Record Examination (GRE).
  5. In the case of foreign students, a TOEFL score of at least 500 and a score of at least 470 on the verbal portion of the GRE.
  6. Career goals in professional education consistent with the objectives of a doctoral program.
  7. Appropriate prior work experience.
  8. A personal interview with a committee of program faculty.
- Applicants to the program must submit the following records and documents:
1. Official transcript from all higher education institutions attended.
  2. Official copy of the GRE scores.
  3. Three letters of recommendation that support the application.
  4. A current resume.
  5. A statement of personal interest in the program.
  6. A completed Application for Graduate Admission.

Final decisions on admission are made by the Faculty Admissions Committee. Having met the minimum criteria stated above does not assure admission to the program. Additional information can be obtained from the Coordinator of Doctoral Programs, DM 255.

### Core Courses: (15)

EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3

EDF 7934	Seminar in Social Foundations of Education	3
EDF 6211	Psychological Foundations of Education	3

### Specialty Area: (36)

The specialty areas are art education, early childhood education, elementary education, English education, instructional leadership, mathematics education, music education, reading education, science education, and social studies education.

### Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of course in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the other departments of the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

### Research and Statistics: (12)

#### Required Courses

EDF 5481	Analysis and Application of Research	3
EDF 6486	Research Methods in Education: Design and Analysis	3

#### One of the following:

EDF 6403	Quantitative Foundations of Educational Research	3
	or	
EDF 6475	Qualitative Foundations of Educational Research	3

### Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the College and to the Dean of Graduate Studies.

### Dissertation

The student is responsible for 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

EDG 7980 Doctoral Dissertation 6-9

## Graduate Professional Certificate Program in Reading and Language Arts

The Reading and Language Arts Certificate Program enables teachers to extend their competence in reading and language arts instruction. Completion of the Certificate Program qualifies the teacher to receive Florida State Certification in Reading, grades K-12. Entrance requirements are an introductory reading course, and a 2.75 GPA in the last two years of college work. Students are required to have completed two years of full-time teaching prior to completing the program. Applicants should apply directly to the Chairperson of the Reading Program.

### Prerequisite Course

RED 6155	Instruction in Elementary Reading	
	or	
RED 6305	Instruction in Early Childhood Reading	3

### Required Program

EDF 5432	Measurement and Evaluation in Education	3
LAE 5415	Children's Literature	3
LAE 6355	Instruction to Elementary Language Arts	3
RED 6546	Diagnosis of Reading Difficulty	3
RED 6515	Programs of Remediation in Reading	3

### Advised Electives<sup>1</sup>

Two courses chosen from language-related courses offered outside of the College of Education 6

<sup>1</sup>Elective courses are chosen from an approved list in consultation with a Reading Program advisor.

## Certification in Gifted Education

Individuals who hold Florida teacher certification in any subject or field, may receive certification for teaching the

gifted (Grades K-12) by completing the following courses:

EGI 5051	Nature and Needs of the Gifted	3
EGI 5232	Educational Procedures and Curriculum for the Gifted	3

## Foundations: Urban, Multicultural, International Education

S.L. Woods, *Associate Professor and Interim Chairperson, Educational Foundations*

John A. Carpenter, *Professor, Educational Foundations and International Development Education*

Joseph B. Cook, *Professor, Community College Teaching*

Robert V. Farrell, *Associate Professor, Educational Foundations, International Development Education*

I. Ira Goldenberg, *Professor and Dean, Educational Foundations*

Chris Uber Grosse, *Associate Professor, TESOL*

E. Joseph Kaplan, *Assistant Professor, Educational Foundations*

Colleen A. Ryan, *Associate Professor, Educational Psychology, Educational Foundations*

The Department is fully committed to two guiding missions of the College of Education: to support the preparation of superior teachers and other human resource professional, and to work for change where change is needed in society and its institutions. The Department oversees graduate programs and courses for students who are interested in working in the fields of:

Teaching English to Speakers of Other Languages (TESOL)

Urban Education

The Department also coordinates the Foundation of Education courses and the Professional Education Core. It is the administrative location of the Dade County Public School/FIU Urban Education Program, which is comprised of the Urban Education Certificate Program and the Master's Degree in Urban Education.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission require-

ments are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

## Master of Science in Teaching English to Speakers of Other Languages (TESOL)

Requirements for admission are satisfactory scholastic aptitude as determined by the Graduate Admissions Standards, and evidence of a satisfactory record in the teaching field.

To be admitted into the Master's degree program, a student must: a) hold a bachelor's degree from an accredited university or college; b) have a 'B' (3.0) average or higher in all junior and in senior years course work for the bachelor's degree; or have a combined score (verbal and quantitative) of 1000 or higher on the Graduate Record Examination; or hold a master's degree from an accredited university or college; in any case the student must present a GRE score. In the case of foreign students whose first language is other than English, a score of 500 on the TOEFL examination is also required. Admission to the program is contingent upon departmental approval.

### Degree Requirements

The Master of Science degree consists of 30 semester hours. A maximum of six semester hours may be transferred into the program from outside the University, subject to the approval of the major advisor. A maximum of six semester hours of graduate level courses taken as an undergraduate may be included in the program provided they have not been used to satisfy degree requirements for an undergraduate program.

This program does not meet requirements for initial teacher certification by the Florida Department of Education.

### Prerequisite

Introduction to Linguistics is the prerequisite to study in the program. It may be satisfied with LIN 3010 or LIN 3013.

### Required Program: (30)

#### Professional Education: (12)

All students will be required to complete 12 semester hours in the College of Education:

EDF 5481	Analysis and Application of Educational Research	3
TSL 5142	Curriculum Development in ESOL	3
	or	

ESE 6215	Secondary School Curriculum	
TSL 5371	Special Methods of TESOL	3
TSL 5938	Seminar in Language Testing	3

### Program Courses: (15)

#### Required: (6)

LIN 5501	English Syntax	3
	Electives	9

In consultation with the advisor, students will choose 9 semester hours from among the following:

LIN 5222 General Phonology, LIN 5342 Advanced Syntax, LIN 5805 Semantics, LIN 5331 General Morphology and Syntax, LIN 5405 Contrastive Analysis, LIN 5625 Studies in Bilingualism, LIN 5602 Language Contact, LIN 5600 Intro to Sociolinguistics, EDG 5707 Cross-Cultural Studies, LIN 5715 Language Acquisition, TSL 5993 Developing ESOL Language and Literacy.

### Field Component: (3)

The remaining three semester hours will consist of a supervised field experience in the teaching of English to speakers of other languages. The field experience may be arranged according to one of the following options:

1. ESOL in Public Schools;
2. ESOL in adult or community college education, or both;
3. ESOL in private schools or private enterprise;
4. the English Language Institute at the University.

All arrangements must be approved by the advisor.

### Graduation Requirements

To receive the Master of Science degree in Curriculum and Instruction, with a subspecialty in Second Language Education, TESOL track, the student must complete the required 30 semester hours of coursework with a 'B' or 3.0 average or higher and no more than two 'C' grades in required courses.

## Master of Science in Urban Education

To be eligible to enroll in the Master's in Urban Education program, students must meet all the University's and the College of Education's admission requirements.

### Required Courses

EDE 5941	Practicum I in Urban Schools Education	5
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EDE 5942	Practicum II in Urban Schools Education	5
EDE 5943	Practicum III in Urban Schools Education	5
EDF 5481	Analysis and Application of Education Research	3
EDE 5267	Education of the Child in Urban Society	3
EDF 6211	Psychological Foundations of Education	3
EDE 6488	Research in Elementary Education	3

**Guided Electives**

As approved by the student's advisor 6

**Add-on Certification and Certificate Programs****Add-on Certification in ESOL**

Individuals who currently hold or are working toward a teaching certificate in any area of education may receive add-on certification in ESOL by completing a set of courses in ESOL, and demonstrating language proficiency in English. For admissions and graduation requirements, please refer to the Degree program.

**Required Program**

TSL 5938	Seminar in Second Language Testing	3
EDG 5707	Cultural and Cross-Cultural Studies	3
LIN 5625	Studies in Bilingualism	3
TSL 5371	Special Methods of TESOL	3
TSL 5142	Curriculum Development in ESOL	3
TSL 5993	Developing ESOL Language and Literacy	3

**Health, Physical Education and Recreation**

**Ida F. Chadwick**, Associate Professor, Physical Education and Chairperson  
**Judith A. Blucker**, Professor, Physical Education, and Executive Vice Provost

**Charmaine DeFrancesco**, Assistant Professor, Physical Education  
**Richard Lopez**, Associate Professor, Exercise Physiology

**George B. Pearson**, Professor, Physical Education

**Steven Pugh**, Assistant Professor, Physical Education

**Thomas K. Skalko**, Associate Professor, Therapeutic Recreation

**Robert M. Wolff**, Associate Professor, Parks and Recreation Management

The Department of Health, Physical Education, and Recreation offers programs leading to the Master of Science degree in Health Education, with a track in Exercise Physiology; Parks and Recreation Management, with tracks in Leisure Service Management and Therapeutic Recreation; and Physical Education with a track in Sports Management.

The program requirements and descriptions listed below are subject to change without advanced notice. Program faculty should be consulted for academic advisement.

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

**Master of Science in Health Education****Exercise Physiology Specialization**

The graduate specialization in exercise physiology is designed to prepare individuals to work in the fields of exercise testing in a supervisory capacity and in cardiac rehabilitation as a designer of exercise rehabilitation programs.

The program will focus on the physiological effects of exercise and training with application to the improvement of health and functional capacity of hospitalized and non-hospitalized individuals with heart disease. The program will emphasize the role of

exercise in diagnosis, prevention, and rehabilitation of heart disease.

The program will enable students to develop the competencies required by the American College of Sports Medicine for certification as an Exercise Specialist, a Health Fitness Director, and a Program Director. Provisions will be made to enable those students entering the program without an Exercise Test Technologist Certification and a Health/Fitness Instructor Certification to develop those prerequisite competencies.

**Admission Requirements**

An applicant for admission to graduate study must meet the existing criteria set forth by the Florida Board of Regents. Presently, these are a 3.0 GPA in the third and fourth year of the undergraduate program, or a combined score of 1000 on the GRE (verbal and quantitative sections), or completion of a master's degree program at an accredited university. All applicants must submit a GRE test score.

**Prerequisite Classes**

One class in each of the following areas: exercise physiology, kinesiology, anatomy, physiology, and nutrition.

**Required Program: (30)****Exercise Physiology/Sports Medicine Requirement<sup>1</sup>**

PEP 5116	Exercise Specialist	3
PET 5625	Sports Medicine	3
PET 6775	Health Fitness Director	3
PET 6785	Exercise Program Director	3

**Physiology/Biochemistry/Special Topics Requirement**

APB 4864	Human Systemic Physiology	3
	or	

An approved alternative and

A second approved course in physiology, biochemistry, special topics or nutrition 3

**Research Requirement**

Advisor approved course in research.

**Internship Requirement**

PET 6940	Internship in Exercise Physiology <sup>1</sup>	
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**Electives<sup>2</sup> (0-6)**

<sup>1</sup>Students presently employed in the field in an administrative capacity may be exempted from this requirement.

<sup>2</sup>Students who have not taken PET 5387 Exercise Test Technology and PEP 5115 Fitness Instructor or who do

not have ACSM certification in these areas must take these classes as part of their required program of study. Students who have the classes or the certifications will take electives.

## Master of Science in Parks and Recreation Management

The graduate program in Parks and Recreation Management is planned to provide advanced preparation for administrative and supervisory level positions within a leisure services delivery system. The program includes electives which give flexibility regarding an individual's specific career goals as a future practitioner in Parks and Recreation Management.

To enter the program in Parks and Recreation Administration, a student must have a 3.0 GPA in upper division work or score 1000 or higher on the Graduate Record Examination, possess a bachelor's degree, and have appropriate undergraduate preparation in recreation.

### Required Program: (30-31)

#### Required Core: (12)

EDF 5481	Educational Research	3
LEI 5510	Program Administration in Parks and Recreation	3
LEI 5595	Seminar in Parks, Recreation, and Sports Management	3
LEI 5605	Philosophical and Social bases of Parks and Recreation	3

### Select from one of the following two tracks: (18-19)

#### Leisure Service Management Track

LEI 5907	Directed Study in Parks and Recreation Management	3
Advised Electives		15

A student who did not complete a Parks, Recreation, Leisure or Sports oriented internship/field experience during his or her undergraduate degree curriculum will be required to take:

LEI 6922	Supervised Field Experiences in Parks and Recreation	6-9
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#### Therapeutic Recreation Track

LEI 5716	Program Planning in Therapeutic Recreation	3
LEI 5719	Client Assessment, Evaluation, and Documentation	3

LEI 6725	Administrative Aspects of Therapeutic Recreation	3
LEI 5907	Individual Study in Parks and Recreation Management	3
Advised Electives		7

Students not currently certified as Therapeutic Recreation Specialists must also register for the following course as part of their overall program:

LEI 6922	Supervised Field Experiences in Parks and Recreation	6-9
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## Master of Science in Physical Education

The Master of Science degree program in Physical Education is designed to provide advanced preparation for teachers of physical education. Applicants for admission must hold or qualify for Florida Teacher Certification in Physical Education and must satisfy requirements for scholastic aptitude as determined by the graduate admission standards: GPA of 3.0 or 1000 on the GRE, or both. Applicants must submit GRE scores.

### Required Program: (30)

#### Professional Education: (3)

EDF 5481	Analysis and Application of Educational Research	3
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#### Area of Specialization: (21)

PET 5216	Sports Psychology	3
PET 5238	Motor Learning	3
PET 5256	Sociology of Sport	3
PET 5625	Sports Medicine	3
PET 5436	Physical Education Curriculum	3

PET 6597	Survey of Research in Physical Education	3
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PET 6932	Seminar in Physical Education	3
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PET 4510	Evaluation in Physical Education <sup>1</sup>	3
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RED 6336	Reading in the Secondary School <sup>2</sup>	3
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Electives		6-12
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<sup>1</sup>Not required of students holding K-8 Certification or students who have completed an equivalent undergraduate course.

<sup>2</sup>Students who have already met the Reading Requirement as undergraduates or through approved in-service education may substitute an elective for this course. The course is not required of students holding K-8 certification in Physical Education.

## Sport Management

The purpose of this track is to provide an option for persons seeking a master's degree in an allied (non-teaching) career in physical education. This degree program would primarily be for persons who do not presently hold Florida teaching certification credentials. Consequently, completion of this degree would not provide such teacher certification for the degree recipients. Examples of potential student clientele would include all foreign and American college graduates with bachelor's degrees in physical education, sports science, business, recreation, and other related areas.

### Admission Requirements

Students must hold a bachelor's degree from an accredited university. The published university requirements for admission into the master's degree programs must be met. Students who do not have an undergraduate major in physical education or a related area are responsible for meeting the prerequisites for any course listed in the program's curriculum. A program advisor must be consulted regarding complete degree requirements.

### Required Program: (33)

EDF 5481	Analysis and Application of Educational Research	3
PET 5216	Sports Psychology	3
PET 5256	Sociology of Sport	3
PET 5625	Sports Medicine	3
PET 6944	Supervised Field Experience <sup>1</sup>	3-6
PET 5936	Special Topics: Sport Management	2-4
PET 5476	Sports Administration and Management	3

<sup>1</sup>An internship in an appropriate sport agency or business will be required.

### Advised Electives: (8-13)

With the prior approval of the program advisor, students must elect at least nine credits from a variety of courses to build a specialized degree program based on long-term career goals. With approval from the appropriate department, examples of electives would include, but not limited to, graduate courses from such areas as business, management, public administration, parks and recreation administration, nutrition, psychology, sociology, and physical and occupational therapy.

## Middle, Secondary, and Vocational Education

**A. Dean Hauenstein**, *Professor and Chairperson, Vocational Education, Technology Education*

**Arnhilda Badia**, *Associate Professor, Modern Languages Education*

**David Y. Chang**, *Assistant Professor, Art Education*

**Myrna P. Crabtree**, *Professor, Home Economics Education, Vocational Education*

**Anna Marie Evans**, *Assistant Professor, Social Studies Education*

**Luis A. Martinez-Perez**, *Associate Professor, Science Education*

**C. Edwin McClintock**, *Professor, Mathematics Education*

**G. Douglas Meyers**, *Associate Professor, English Education*

**Dominic A. Mohamed**, *Associate Professor, Vocational Administration and Supervision, Vocational Education*

**George E. O'Brien**, *Assistant Professor, Science Education*

**Clem Pennington**, *Associate Professor, Art Education*

**Janice R. Sandiford**, *Associate Professor, Health Occupations Education, Computer Education, Vocational Education, and Assistant Dean for North Miami and Broward*

**Robert Shostak**, *Professor, English Education, Computer Education*

**Jan L. Tucker**, *Professor, Social Studies Education, Director, Global Awareness Program*

**Robert Vos**, *Associate Professor and Associate Dean, Organizational Training, Technical Education, Vocational Education*

**Michael J. Wagner**, *Professor, Music Education*

The Department of Middle, Secondary, and Vocational Education offers graduate programs leading toward the Master of Science and the Doctor of Education degrees.

### Masters of Science Programs

Art Education

English Education

Mathematics Education

Modern Languages Education

Music Education

Science Education

Social Studies Education

Vocational Home Economics Education

Home Economic Education Track  
(non-school based)

Vocational Administration and Supervision  
Vocational Industrial Education  
Health Occupations Education Track  
Technology Education Track  
Technical Education Track

### Doctoral Programs

Curriculum and Instruction  
Vocational and Technical Educational Leadership  
(a track of the Adult Education and HRD program)

All stated admission requirements are to be considered minimums. A student who meets these minimum requirements is not automatically assured admission. Program admission requirements are subject to change. It is the responsibility of the student to assure that he/she has met the requirements.

### Master of Science Degree Programs

#### Art Education

##### Required Program: (36)

##### Education, including Art Education: (15)

EDF 5481	Analysis and Application of Educational Research	3
ARE 6140	Curriculum and Instruction in Art	3
ARE 6262	Organization and Coordination of School and Community Art Programs	3
ARE 6706	Seminar In Art Education: Contemporary Issues and Research	3

##### Select one of the following:

EDE 6205	Curriculum Design for Childhood Education or	3
ESE 6215	Secondary School Teaching Field or	
EEX 6051	Exceptional Children and Youth or	
EDS 6050	Supervision In Education or	
EDF 5955	Field Study Abroad	

#### Fine Arts

Art History		3
Studio Art (Three semester hours credit for each studio course)		12
ARE 4848	Concepts In Art Education	3

ARE 6925-29	Workshop in Art Education	3
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### English Education

#### Required Program: (30)

EDF 5481	Analysis and Application of Educational Research	3
LAE 6339	Teaching English in the Secondary School <sup>1</sup>	3
ESE 6215	Secondary School Curriculum	3
LAE 6935	Seminar in English Education <sup>2</sup>	3

<sup>1</sup>Prerequisite: Undergraduate English methods course.

<sup>2</sup>Permission of Instructor required.

Teaching Field: English	15
Advisor Approved Electives	3

### Mathematics Education

#### Required Program: (33)

EDF 5481	Analysis and Application of Educational Research	3
MAE 6336	Teaching Mathematics in the Secondary School <sup>1</sup>	3
MAE 6899	Seminar in Mathematics Education <sup>1</sup>	3
ESE 6215	Secondary School Curriculum	3
Teaching Field: Mathematics		12
Electives: In Education or Mathematics, or both		9

<sup>1</sup>Permission of instructor; undergraduate secondary mathematics methods, and mastery of programming language beyond BASIC and graduate level mathematics coursework required.

### Modern Language Education

#### Prerequisites

One course in general linguistics or the successful completion of LIN 3010 or LIN 3013.

Applicants for Admission must hold or qualify for a Florida Teaching Certificate in the area selected, must satisfy requirements for scholastic aptitude as determined by the Graduate Admissions Standards, and must show evidence of a satisfactory record in the teaching field.

To be admitted into the Master's Degree program, the student must hold a bachelor's degree from an accredited university or college; have a 3.0 average or higher in all junior and senior year course work for the bachelor's Degree; or have a combined score (verbal and quantitative) of 1000 or higher on the graduate record ex-

amination; or hold a master's degree from an accredited university or college. In any case, the student must present a GRE score; achieve a score of 220 on the Test of Spoken English; and in the case of international students, whose first language is other than English, a score of 500 on the TOEFL examination is also required.

### Degree Requirements

The Master of Science Degree will consist of 30 semester hours. A maximum of six semester hours may be transferred into the program from outside the University, subject to the approval of the major advisor. Also, a maximum of six semester hours of upper division undergraduate courses may be included in the program provided they have not been used to satisfy degree requirements for an undergraduate program. This program does not include requirements for initial teacher certification by the State of Florida Department of Education.

### Required Program: (30)

#### Required Core

All students will be required to complete the following twelve semester hours in the College of Education:

EDF 5481	Analysis and Application of Educational Research	3
ESE 6215	Secondary School Curriculum (or equivalent)	3
FLE 6336	Teaching Second Language in the Secondary School	
FLE 6938	Seminar in Second Language Testing	3
Teaching Field: Modern Languages		15
<i>(Prerequisite: LIN 3010 - 3 semester credits)</i>		

### Field Component: (3)

The remaining three semester hours will consist of a supervised field experience in the teaching of one of the modern languages. The field experience may be arranged according to one of the following options:

- County Public Schools;
- private school;
- adult or community college education;
- adjunct teaching at the University. All arrangements for field experience must be approved by the advisor.

### Graduation Requirements

To receive the Master of Science Degree with a sub-specialty in Second

Language Education, Modern Language track, the student must complete the required 30 hours of coursework with a 'B' average or higher.

### Music Education

#### Required Program: (30)

ESE 6215	Secondary School Curriculum	3
EDE 6205	Curriculum Design for Childhood Education	
EDF 5481	Analysis and Application of Educational Research	3
MUE 6345	The Methodology and Analysis of Music Teaching	3
MUE 6938	Seminar in Music Education	3
MUE 6815	The Acoustical and Psychological Foundations of Music	3
MUT 5381	Arranging	3
MUG 5105	Advanced Conducting	1
Advisor Approved Electives		11

### Science Education

#### Required Program: (33)

EDF 5481	Analysis and Application of Educational Research	3
ESE 6215	Secondary School Curriculum	3
SCE 6635	Teaching Science in the Secondary School	3
SCE 6933	Seminar in Science Education	3
Teaching Field		12
Biology or chemistry or physics or courses from the following areas with approval of advisor: biology, chemistry, physics, geology, and environmental sciences. (For Junior High Science Teachers).		
Advisor Approved Electives		9

### Social Studies Education

#### Required Program: (33)

SSE 6633	Teaching Social Studies in the Secondary School	3
ESE 6215	Secondary School Curriculum	3
EDF 5481	Analysis and Application of Educational Research	3
SSE 6939	Seminar in Social Studies Education	3
Teaching Field: Social Studies, Social Science, History		12

### Advisor Approved Electives

9

### Master of Science: Alternate Track

The Alternate Track modifies the existing master's degree programs to accommodate candidates with a baccalaureate degree appropriate to the certification area but without certification, who are seeking entry into the teaching profession. This modified track is no less rigorous than the existing master's degree program, but includes courses which provide the necessary background in professional education together with the master's level academic coursework.

Entry requirements include a bachelor's degree or a strong minor (30 hours with a 3.0 or higher in the major subject area) in a certifiable teaching area (i.e. mathematics, science, modern languages, music, art, English, social studies, history) and a minimum 3.0 cumulative GPA for the two most recent years of study or a combined GRE score of 1000. In either case, the GRE score must be submitted. In addition to the minimum GPA or the combined GRE score, or both, the applicant must receive an affirmative recommendation from the designated Program Leader, Dean of the College, or his designee following a personal interview.

This degree program requires a minimum of four semester sequence of full-time study which includes two Summer Terms, a Fall and a Spring Term and will consist of 45-48 semester hours, depending on each student's previous academic preparation.

### Alternate Track

All students admitted to this track will complete the following courses as well as the graduate program courses in each of the chosen fields.

EDF 6211	Psychological Foundations of Education	3
EDF 5517	Education in American History	3
EDG 5414	Instructional Strategies in Teaching	3
Special Teaching Lab: Area Student Teaching (Practicum)		3-6



## Administration and Supervision of Vocational Education

Admission to the Vocational Administration and Supervision program requires adherence to the general standards as specified in the Admission Requirements for Graduate Students at the University. To be certified in Administration and Supervision in Vocational Education in Florida, a person must have at least three years of successful teaching experience in one of the vocational education areas. While one year of successful teaching will meet the experience requirement for admission to the master's degree program initially, the three-year teaching experience requirement must have been completed either before or at the same time as degree requirements are completed. Each graduate student, in consultation with the advisor, plans a program of study to include a core of professional competence, an area of emphasis, and electives.

### Required Program: (33-36)

#### Required Core: (27-30)

EVT 5168	Curriculum Development in Vocational Education	3
EVT 5265	Supervision and Coordination of Vocational Education Programs	3
EVT 5664	Community Relations and Resources for Vocational Education	3
EVT 6264	Administration of Local Vocational Education Programs	3
EVT 6930	Seminar in Vocational Education	3
EDA 6061	Introduction to Educational Leadership	3
EDA 6530	The Administration of the Secondary School	3
EDS 6050	Supervision and Staff Development	3
EDG 6250	Curriculum Development	3
RED 6336	Reading in the Content Area <sup>1</sup>	3

#### Area of Professional Emphasis

EVT 6946	Supervised Field Experience	3
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#### Electives

The candidate may select a course (or courses) that will increase administrative and supervisory competencies

<sup>1</sup>Students who have met the reading requirement as undergraduates or through approved in-service education

may substitute an elective for this course.

## Health Occupations Education

### Required Program: (30)

#### Required Core: (12-15)

EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational Education	3
EVT 6760	Research in Vocational Education	3
EVT 6930	Seminar in Vocational Education	3
RED 6336	Reading in the Content Area <sup>1</sup>	3

<sup>1</sup>Students who have met the reading requirement as undergraduates or through approved in-service education may substitute an elective for this course.

#### Area of Professional Emphasis: (9)

EVT 5315	Improvement of Teaching Strategies in Health Occupations and Nursing Education	3
EVT 5317	Occupational Analysis in Health Occupations and Nursing Education	3
EVT 6318	Current Issues in Health Occupations and Nursing Education	3

#### Technical Electives: (6)

The candidate will be encouraged to select courses that will increase subject area technical competence, career goals, and teaching certification requirements.

## Home Economics Education

This track focuses on educational leadership of Home Economists presently employed in non-school educational environments and those preparing for such positions.

This program does not lead to State of Florida Teacher Certification. Admission to this track does not require teacher certification.

### Required Program: (30)

#### Required Core: (18)

HEE 5335	Trends and Issues in Home Economics Education	3
HEE 6156	Teaching Home Economics in Diverse Environments	3

ADE 5180	Organizational and Community Processes in AE/HRD	3
EDF 5481	Analysis and Application of Educational Research	3
HEE 6915	Research in Home Economics Education	3
HEE 6937	Seminar in Home Economics Education	3

#### Area of Professional Emphasis

With program advisor's approval, students may select courses in Home Economics subject matter based on professional competencies needed.

#### Electives

The candidate in consultation with the advisor will make selections on the basis of individual needs and career goals.

## Technical Education

This track is designed for post-secondary education instructors in the public and private sector.

### Required Program: (30)

#### Required Core: (15)

EVT 5168	Curriculum Development in Vocational Education	3
EDF 5481	Analysis and Application of Educational Research	3
EVT 5650	Trends and Issues in Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 6930	Seminar in Vocational Education	3

#### Area of Professional Emphasis: (9)

EVT 5078	Technical Education in American Society	3
ADE 5383	Instructional Processes in AE/HRD	3
ADE 5385	Adult Teaching and Learning	3

#### Advised Electives: (6)

#### Advised Electives for Non-education Graduates: (6)

EDF 5812	National Educational Systems: A Comparative Analysis or	3
EDF 6215	Application of Learning Theory to Instruction	3

## Technology Education

This track focuses on educational leadership of technical education programs commonly found in industry, adult vocational education and community/junior colleges.

### Required Program: (30)

#### Required Core: (15)

EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 6760	Research in Vocational Education	3
EVT 6930	Seminar in Vocational Education	3

#### Area of Professional Emphasis: (9)

EIA 5811C	Equipment and Facilities Planning	3
EIA 66683	Instructional Projects Development	3
EIA 6931	Analysis of Technology Education	3

The student, under the direction of the program advisor, may develop professional competencies in an area of emphasis through seminars, methods courses, workshops, or independent study.

#### Technical Electives: (6)

The student is encouraged to select courses that will increase subject area technical competence. 6

## Vocational Home Economics Education

### Required Program: (30)

#### Required Core: (15-18)

HEE 5335	Trends and Issues in Home Economics Education	3
EVT 5168	Curriculum Development in Vocational Education	3
HEE 6156	Teaching Home Economics in Diverse Environments	3
HEE 6915	Research in Home Economics Education	3
HEE 6937	Seminar in Home Economics Education	3
RED 6336	Reading in the Content Area <sup>1</sup>	3

#### Area of Professional Emphasis: (9)

With program advisor's approval, students may select courses in Home Eco-

nomics subject matter based on professional competencies needed.

#### Electives: (3-6)

The candidate in consultation with the advisor will make selections on the basis of individual needs and career goals.

<sup>1</sup>Students who have met the reading requirement as undergraduates or through approved in-service education may substitute an elective for this course.

## Vocational Industrial Education

### Required Program: (30)

#### Required Core: (18-21)

EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5695	International Comparative Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 6760	Research in Vocational Education	3
EVT 6930	Seminar in Vocational Education	3
RED 6336	Reading in the Content Area <sup>1</sup>	3

#### Area of Professional Emphasis: (3-9)

A student under the direction of an advisor, may develop professional competencies in an area of emphasis through school-based field experiences, seminars, methods courses, workshops, or independent study.

#### Technical Electives: (3-6)

The candidate will be encouraged to select courses that increase subject area technical competence.

<sup>1</sup>Students who have met the reading requirement as undergraduates or through approved in-service education may substitute an elective for this course.

## Doctoral Programs

### Curriculum and Instruction

The doctoral program in Curriculum and Instruction offers specialties in the following areas: Art Education, Early Childhood Education, Elementary Education, English Education, Instructional Leadership, Mathematics Education, Music Education, Science Education,

Reading Education, and Social Studies Education.

#### Admission Requirements

Criteria for admission to the Doctoral Program include the following:

1. A master's degree from an accredited institution.
2. A satisfactory grade point average (at least 3.25) in all prior graduate work.
3. A satisfactory grade point average (at least 3.0) in the last 60 semester hours of undergraduate work.
4. A combined score of 1000 (verbal and quantitative) on the Graduate Record Examination (GRE).
5. In the case of foreign students, a TOEFL score of at least 500 and a score of at least 470 on the verbal portion of the GRE.
6. Career goals in professional education consistent with the objectives of a doctoral program.
7. Appropriate prior work experience.
8. A personal interview with a committee of program faculty.

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation that support the application.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

Final decisions on admission are made by the Faculty Admissions Committee. Having met the minimum criteria stated above does not assure admission to the program. Additional information can be obtained from the Coordinator of Doctoral Programs, DM 255.

#### Core Courses: (15)

EDG 7222	Curriculum: Theory and Research	3
EDG 7362	Instruction: Theory and Research	3
EDG 7665	Seminar in Curriculum	3
EDF 7934	Seminar in Social Foundations of Education	3
EDF 6211	Psychological Foundations of Education	3

#### Specialty Area: (36)

The specialty areas include art education, early childhood education, elemen-

tary education, English education, instructional leadership, mathematics education, music education, reading education, science education, and social studies education.

### Cognate Area: (18)

The cognate area requires a minimum of 18 semester hours of coursework in a single area of study related to the specialty. The courses should be chosen with regard to coherence and relevance to the anticipated substantive aspect of the dissertation and in consultation with the advisor. The cognate area may be taken in the College of Education, in the College of Arts and Sciences, or any other area offering courses relevant to the student's program.

### Research and Statistics: (12)

### Candidacy Examinations and Advancement to Candidacy

The student must successfully pass candidacy examinations covering coursework and also submit copies of a dissertation proposal, which has been approved by the supervisory committee, to the Dean of the School and to the Dean of Graduate Studies.

### Dissertation

The student is responsible for 24 semester hours of dissertation credits. The dissertation must be an original contribution to knowledge in an area of early childhood education, elementary education, secondary education, one of the K-12 areas, or in instructional leadership.

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

EDG 7980 Doctoral Dissertation 6-9

### Admission Requirements

Applicants to the program must submit the following records and documents:

1. Official transcript from all higher education institutions attended.
2. Official copy of the GRE scores.
3. Three letters of recommendation.
4. A current resume.
5. A statement of personal interest in the program.
6. A completed Application for Graduate Admission.

## Vocational and Technical Education Leadership

The doctoral track in Vocational and Technical Education Leadership is designed to promote the preparation of highly competent professionals in vocational and technical education.

It is a track within the Adult Education and Human Resource Development doctoral program. Although each curriculum has its own specific objectives, the goals shared by these programs are the improvement of educational practice and stimulation of personal and professional growth toward excellence.

The Doctor of Education degree is conferred on the basis of high scholarship and skill in the application of knowledge from theory and research findings to practical vocational and technical education problems.

Applications for admission to the doctoral program are invited from individuals who are highly motivated and intellectually capable of meeting the challenges of a rigorous doctoral degree program.

### Admission Requirements

Criteria for admission to the Doctoral Program include the following:

1. A master's degree from an accredited institution.
  2. A satisfactory grade point average (at least 3.25) in all prior graduate work.
  3. A satisfactory grade point average (at least 3.0) in the last 60 semester hours of undergraduate work.
  4. A combined score of 1000 (verbal and quantitative) on the Graduate Record Examination (GRE).
  5. In the case of foreign students, a TOEFL score of at least 500 and a score of at least 470 on the verbal portion of the GRE.
  6. Career goals in professional education consistent with the objectives of a doctoral program.
  7. Appropriate prior work experience.
  8. A personal interview with a committee of program faculty.
- Applicants to the program must submit the following records and documents:
1. Official transcript from all higher education institutions attended.
  2. Official copy of the GRE scores.
  3. Three letters of recommendation that support the application.
  4. A current resume.
  5. A statement of personal interest in the program.

6. A completed Application for Graduate Admission.

Final decisions on admission are made by the Faculty Admissions Committee. Having met the minimum criteria stated above does not assure admission to the program. Additional information can be obtained from the Coordinator of Doctoral Programs, DM 255.

### Program of Study

Doctorate programs of study vary according to the individual needs of the participants and their current or anticipated professional goals. A typical program will require a minimum of 99 semester hours beyond the baccalaureate degree and will involve the categories of courses noted below. The list should be considered as a sample program rather than an absolute delineation of exact requirements. Actual programs are planned by the participants, their major professor, and doctoral committee.

### Program Components (99)

Adult Education and HRD Core <sup>1</sup>	12
Generic Core <sup>2</sup>	30-36
Vocational and Technical Education Leadership <sup>3</sup>	15-21
Research and Statistics	12
Prospectus and Dissertation	24

The student is expected to complete the dissertation within five years from the date of advancement to candidacy (i.e. successful completion of all written and oral examinations, favorable recommendations of the supervisory and guidance committee, and an approved dissertation proposal). A minimum of six credit hours of dissertation are taken per semester during the time that the dissertation is being completed.

<sup>1</sup>Common AE & HRD and V & TEL requirement

<sup>2</sup>May include up to 36 semester hours of graduate credit from an approved Masters degree program and transfer credit.

<sup>3</sup>May include AE & HRD courses.

## Certificate and Add-on Certification Programs

### Graduate Professional Certificate - Health Occupations Education

The overall purpose of the professional certificate program in health occupations education is to enhance the development of basic teaching skills and/or instructional techniques of health occu-

pations educators. The professional certificate program provides for the continuing education, upgrading or redirection needs of health occupations teachers through planned advisement and professional certificate recognition. The programs are for both undergraduate and graduate, degree or non-degree seeking students.

This 24 semester hour plan is designed to meet the needs of the individual who (1) is occupationally competent in a health field and currently teaching or desires to teach a health occupations subject, (2) holds a teaching certificate or equivalent or bachelor's degree or both including out of field and (3) does not wish to, or is unable to, meet the master's degree entrance requirements necessary to pursue the master's degree.

#### Prescribed Courses: (24)

EVT 5078	Technical Education in American Society or	3
EVT 5650	Trends and Issues in Vocational Education	3
EVT 5168	Curriculum Development in Vocational Education	3
EVT 5769	Evaluation in Vocational and Technical Education	3
EVT 5315	Improvement of Teaching Strategies in Health Occupations and Nursing Education	3
EVT 5317	Occupational Analysis in Health Occupations and Nursing Education and/or	3
ADE 5385	Adult Teaching and Learning	3

#### Advised Electives

A minimum of two courses selected from courses in General Professional and Adult Education, Vocational Education, Health Service Administration or Health Speciality

6

## Course Descriptions

### Definition of Prefixes

ADE - Adult Education; ARE - Art Education; BTE - Business Teacher Education; CGS - Computer Applications; CHD - Child Development; COA - Consumer Affairs; DAA - Dance Activities; DAE - Dance Education; EDA - Education: Educational Leadership; EDE - Education: Elementary; EDF - Education: Foundations; EDG - Education: General; EDH - Education - Higher; EDP - Education: Psychology; EDS - Education: Supervision; EEC - Education: Early Childhood; EED - Education: Emotional Disorders; EEX - Education: Exceptional Child, Core Competencies; EGC - Education: Guidance and Counseling; EGI - Education: Exceptional Child, Gifted; EIA - Education: Technology; ELD - Education: Specific Learning Disabilities; EME - Education: Technology and Media; EMR - Education: Mental Retardation; ESE - Education: Secondary; ETE - Engineering Technology: Electrical; ETM - Engineering Technology: Mechanical; EVT - Education: Vocational/Technical; FAD - Family Development; FLE - Foreign Language Education; HEE - Home Economics Education; HHD - Housing; HLP - Health, Leisure, and Physical Education; HME - Home Management Equipment; HOE - Home Economics; HSC - Health Sciences; LAE - Language Arts and English Education; LEI - Leisure; MAE - Mathematics Education; MUE - Music Education; PEL - Physical Education; PEM - Physical Education Activities; PEO - Physical Education Activities; PEP - Physical Education Activities; PEQ - Physical Education Professional Water; PET - Physical Education Therapy; RED - Reading Education; SCE - Science Education; SPA - Speech Pathology and Audiology; SPS - School Psychology; SSE - Social Studies Education; TSL - TESOL.

**ADE 5081 Introduction to Adult Education and Human Resource Development (3).** Developing rationale for and philosophy of human resource development/adult education: contrasting agencies, program, and curricula; analyzing factors affecting human resource development, differentiating adults and youths as learners; planning and appraising human resource development programs.

**ADE 5180 Organizational and Community Processes in AE/HRD (3).** Analyzing human resource and community development programs, the processes and implemental strategies;

needs assessment objectives, curricular, recruitment, implementation, and evaluation.

**ADE 5195 Designing Education and HRD Programs for Disadvantaged Adults (3).** Distinguishing various forms of disadvantage; analyzing forces which inhibit solution; criticizing responses to problems; developing programs, curricula materials, recruitment strategies, and evaluation designs.

**ADE 5260 Organization and Administration of Adult Education and Human Resource Development Programs (3).** Analyzing regulations affecting adult education/human resource development, selecting and training staff; selecting organizational patterns; executing managerial responsibilities; administering supportive services; relating training to organization development.

**ADE 5383 Instructional Processes in AE/HRD (3).** Analyzing models for instructional design; identifying and evaluating variables related to such models; developing designs unique for adult learners and organizational needs.

**ADE 5385 Adult Teaching and Learning (3).** Differentiating theories of learning in relation to teaching adults; contrasting characteristics of adults as opposed to youth; evaluating the implications of such distinctions in relation to learning situations appropriate for adults.

**ADE 5906 Directed Study in Adult Education and Human Resource Development (1-3).** Specialized intensive study in areas of interest to the student. Subject to approval of program adviser.

**ADE 5925 Workshop in Adult Education and Human Resource Department (1-6).** Intensive development of selected competencies related to instructional, curricular and/or administrative skills of special interest to students in adult education/human resource development.

**ADE 5935 Special Topics in Adult Education and Human Resource Development (1).** 'Mini-courses' which provide for an examination of special facets of adult education and human resource development.

**ADE 5945 Supervised Field Experience in Adult Education and Human Resource Development (1-6).** Internship in various programs according to needs and interests. Supervisory visits by advisor. Joint conferences and

seminars involving the student, the program advisor, and an appropriate representative of the cooperating agency are conducted intermittently.

**ADE 6674 Organizational Training and HRD Trends and Issues (3).** Presentation & analysis of state-of-art trends impacting development of human resources in specific organizations including educational agencies/business & industry/public sector and commerce. Prerequisites: ADE 5081 or equivalent.

**ADE 6772 Review of Research in Adult Education and Human Resource Development (3).** A review and synthesis of research & development activities in Adult Education/HRD. Examination of resources/practices/designs & justifications. Assessment of the status of research in this field. Prerequisites: EDF 5481, ADE 5383, ADE 5180.

**ADE 6920 Adult Education/HRD Colloquium (1-6).** Lectures & discussions by distinguished educators/social scientists/organizational executives/graduate faculty & students. Colloquia presents specific topics related to issues/trends/designs & applications.

**ADE 6930 Seminar in Adult Education and Human Resource Development (1-3).** Intensive study of instructional, curricular, and/or administrative principles and practices for the solution of problems of special interest to students in adult education and human resource development.

**ADE 7475 Comparative Systems, Strategies and Materials for Adult Education/HRD (3).** A review and critique of the prevailing inventory of packaged systems on the market. Examination of assumptions and problems surrounding their actual usage in local and national organizations. Prerequisites: ADE 5180/ADE 5383.

**ADE 7571 Consulting as an Adult Education/HRD Process (3).** Examination of use of internal/external consultation in organizations. Strategies for making entry diagnoses interventions achieving internalization of processes outcomes. Prerequisites: ADE 5180, ADE 5383.

**ADE 7964 Comprehensive Doctoral Examination, Adult Education/HRD (0).** Comprehensive doctoral examination in the Adult Education/Human Resource Development. Prerequisite: Permission of Major Professor.

**ADE 7980 Doctoral Dissertation, Adult Education (6-9).** Research for doctoral dissertation for those students approved for candidacy in the Adult Education/Human Resource Development Program. Prerequisite: Advancement to Candidacy in doctoral program.

**ADE 7985 Dissertation Defense, Adult Education/HRD (0).** Defense of Dissertation. Prerequisites: Permission of Major Professor and ADE 7980.

**ARE 5553 Introduction to Art Therapy (3).** An overview of art therapy as a verbal and nonverbal means of communication with special emphasis on psychodynamic fundamentals inherent to the process for the purpose of diagnosis, treatment, and intervention for people with special needs.

**ARE 5905 Directed Study in Art Education (1-6).** Individual investigation and research in one or more areas of art education. Prerequisite: Consent of professor.

**ARE 5945 Supervised Teaching: Art Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Program and completion of prerequisite coursework in education and subject matter area. Supervised teaching in an elementary or secondary school.

**ARE 6140 Curriculum and Instruction in Art (3).** Examination of theoretical bases of curriculum development in art education. Analysis of objectives, content, methods, and materials for art instruction in the elementary, junior, and senior high school.

**ARE 6262 Organization and Coordination of School and Community Art (3).** Procedures for the organization, coordination and evaluation of school, community, and in-service art programs, with particular attention to the urban multi-cultural setting.

**ARE 6304 Instruction in Early Childhood Art (3).** Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades.

**ARE 6315 Instruction in Elementary Art (3).** Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education.

**ARE 6706 Seminar in Art Education: Contemporary Issues and Research (3).** Examination of current issues and review of research in art education literature. Delineation and application of an individual research problem. Prerequisite: EDF 5481.

**ARE 6925-29 Workshop in Art Education (3).** Production and application of materials and techniques in art education, in a laboratory or field setting.

**ARE 7938 Doctoral Seminar in Art Education (3).** Advanced doctoral study in current theories and research related to art education. Prerequisites: ARE 6706 and EDF 6486.

**BTE 5447 Teaching Basic Business and Consumer Education (3).** Competency: Knowledge of current and evolving methods, techniques and practices to teach and evaluate basic business and consumer education programs. Prerequisite: Graduate Standing.

**BTE 5455 Teaching in Business Education Occupational Programs (3).** Competency: Knowledge of current and evolving methods, techniques and practices to teach and evaluate office education programs to include office simulation and cooperative business education.

**BTE 5671 Problems, Issues and Trends in Business Education (3).** Competency: Historical information, issues, current trends, new dimensions and problems in business education. Prerequisite: Graduate standing.

**BTE 6432 Teaching Word Processing (3).** Competency: Knowledge, techniques, methods of teaching, concepts and applications of word processing essential for instruction.

**BTE 6905 Directed Independent Study (1-3).** Competency: The ability to identify, research, and report on a special problem in business education. Subject to approval of the program advisor.

**BTE 6925 Special Topics in Business Education (1-3).** Competency: Selected competencies related to instructional and technical areas of business education.

**BTE 6940 Supervised Clinical Field Experience (1-3).** Competency: Updating and upgrading of occupational skills developed via field based work experience in the business and office occupations. Placement is made subject to approval of program advisor.

**CHD 5266 Advanced Studies In Child Development (3).** Survey of current literature on selected areas, analysis of trends and issues, and investigation of recent research in Child Development. Prerequisites: CHD 3220, CHD 4210 or equivalent.

**CGS 5410 Logo for Educators (3).** Aspects of Logo as used by educators. Creative aspects, the language, philosophy, structure, and application. Prerequisite: Computers in Classroom or equivalent.

**CGS 5413 PILOT for Educators (3).** Using language PILOT for teachers. Designed to develop language and its application to all levels of education. Prerequisite: EME 6405 or equivalent.

**EDA 6061 Introduction to Educational Leadership (3).** Introduction to Educational Administration/Leadership as a field of both study and practice. Emphasis is placed on the social, economic, and political context of contemporary educational administration; the organization, governance, and control of American education; and Educational Administration/Leadership as a profession and career.

**EDA 6063 Administration of Independent Schools (3).** A survey course to examine administration of private schools. Includes sectarian and nonsectarian schools, historical overview, values, funding, and administration.

**EDA 6192 Leadership in Education (3).** Review, analysis and application of concepts and theories of leadership with emphasis on organizational factors, group dynamics, and change processes in education.

**EDA 6195 Communication in Educational Leadership (3).** Analysis of principles, processes, and techniques of effective communication and public relations in educational leadership. Study of the theory and practice of school-community relations.

**EDA 6225 Labor Relations in Education (3).** Examines relations between a district school board and its employees as professional organizations, unions, contract management, and employer-employee relationships.

**EDA 6232 School Law (3).** A basic course in school law. Students will understand: the law library and its relationship to the school; demonstrate a knowledge about our legal system; will function in a legal framework; and will identify basic concepts of the law as applied to education.

**EDA 6242 School Finance (3).** Describes and analyzes current and emerging school finance plans; the influence of the courts and federal and state legislation on those plans; special focus on the Florida Education Finance Plan; and the budget responsibilities of the school principal at the school center.

**EDA 6271C Microcomputer Application for Administrators (3).** The role of computers in educational administration. Applications generic to effective leadership utilizing computer technology.

**EDA 6503 The Principalship (3).** Organization and administration of the school; emphasis on competencies necessary for leadership and management of the school center, both elementary and secondary.

**EDA 6905 Directed Study in Educational Leadership (1-3).** For advanced students wishing to engage in an individual project directly related to educational administration or supervision. May not substitute for regular course offerings. Prerequisites: The student must be in a master's degree program in educational leadership at this university and receive the permission of the program leader and instructor.

**EDA 6928 Special Topics: School Improvement (1-6).** Offers an opportunity for experienced school personnel supervisors to participate in a problem-oriented workshop.

**EDA 6930 Seminar in Educational Leadership (3).** In-depth review of competencies in the eight domains of effective educational leadership as prescribed by the Florida Council on Educational Management.

**EDA 6941 Practicum in Educational Leadership (3).** Application of theory and research field-based problems in educational administration/leadership. Prerequisite: Permission of program leader and instructor.

**EDA 6943 Supervised Field Experience (1-6).** Supervised field experience appropriate to the student's interests and professional goals.

**EDA 7069 Educational Policy (3).** Review, analysis, and synthesis of various concepts and models of educational policy formation and implementation.

**EDA 7103 Theories of Educational Administration (3).** Examination of theoretical constructs and models related to the organization and administration

of educational institutions. Prerequisites: Admission to doctoral program and completion of at least 12 semester hours of EDA coursework.

**EDA 7233 School Law II (3).** Examines the area of school law in depth and includes special topics in law, policy and research. Prerequisite: EDA 6232.

**EDA 7236 Law and Higher Education (3).** Analyzes the legal structure of higher education including religion, academic freedom, employment, due process, student's rights, desegregation, tort liability, and current other issues.

**EDA 7288 Politics of Education (3).** Analysis of the political dynamics of educational governance and the political dimension of educational administration.

**EDA 7550 Administration of Higher Education (3).** Analysis of colleges and universities as social organizations with special emphasis on issues of administration, organization, and governance in higher education.

**EDA 7905 Directed Study in Educational Administration and Supervision (1-6).** For advanced graduate students wishing to engage in independent study under the direction of a faculty member. Prerequisite: Admission to doctoral program and permission of program leader.

**EDA 7930 Seminar in Educational Administration and Supervision (3).** Consideration of critical issues and problems in the administration of educational institutions. Prerequisites: EDA 7103 and admission to doctoral program.

**EDA 7937 Special Topics in Higher Education Administration (3).** Seminar devoted to the in-depth treatment of selected special topics in theory, research, and practice related to higher education administration.

**EDA 7943 Field Projects (1-6).** Participation by advanced graduate students in field projects and studies. Prerequisite: Admission to doctoral program, and permission of program leader.

**EDA 7979 Dissertation Research Seminar (3).** Designed to provide advanced doctoral students with a knowledge and understanding of the process of dissertation research and writing and of the dissertation defense. Prerequisite: Advanced doctoral standing.

**EDA 7980 Doctoral Dissertation (6-9).** Research for doctoral dissertation. Prerequisite: Advancement to candidacy in doctoral program.

**EDE 5267 Education of the Child in Urban Society (3).** For students desiring advanced study in the schooling of inner-city pupils in K-6. Prerequisites: EDF 3723, EDG 3321, EDG 3322.

**EDE 5905 Directed Study in Elementary Education (1-3).** Available to undergraduate and graduate elementary majors. Provides for individual investigation in the area of elementary education. Permission of instructor required.

**EDE 5925 Special Topics In Elementary Education (3).** Available to undergraduate and graduate elementary majors. Provides opportunities to develop skills and knowledge under the guidance of a specialist in a selected area. Permission of instructor required.

**EDE 6205 Curriculum Design for Childhood Education (3).** Required in masters programs in early childhood, el and reading education. A study of curriculum theory, research, construction and evaluation related to elementary schools.

**EDE 6225 Education Programs for Older Children (3).** Required in masters program in elementary education. Programs developed for older children; curriculum trends based on contemporary psychological, educational and sociological research.

**EDE 6488 Research in Elementary Education (3).** Elective in masters program in elementary education. Required for students in doctoral program. Research in elementary education and the paradigms associated with this research. Prerequisite: EDF 5481.

**EDE 6930 Seminar in Elementary Education (3).** Elective in masters program in elementary education. Required for students in doctoral program. Advanced study of critical issues and problems in elementary education. Prerequisite: EDE 6488.

**EDE 6971 Thesis In Elementary Education (6).** Elective in masters program in elementary education. Design and preparation of an original scholarly investigation in elementary education. Prerequisites: EDF 5481, EDE 6488, and consent of instructor. Corequisite: EDE 6930.

**EDE 7935 Doctoral Seminar in Elementary Education (3).** Required for students in doctoral program. Ad-

vanced doctoral study of current theories and research related to elementary education. Prerequisites: EDF 6486 and EDE 6930.

**EDF 5216 Effective Learning in the Classroom (3).** A behavioral approach to effective teaching techniques, including theoretical background, behavioral definitions, writing effective objectives, and evaluation of effective learning in the classroom. A field experience will be included.

**EDF 5287 Instructional Technology: Systems Approach (3).** Development of instructional competencies, with an emphasis on the use of a systems approach in the design, implementation, and evaluation of programs.

**EDF 5432 Measurement and Evaluation in Education (3).** Competencies required for the design, construction or selection, and evaluation of measuring instruments. Prerequisite: EDF 5481.

**EDF 5481 Analysis and Application of Educational Research (3).** Competencies required for the design, implementation, and evaluation of educational research, including: problem formulation and analysis; sample selection; instrument selection; formulation of research design and procedure; and data analysis.

**EDF 5517 History of American Education (3).** An examination of different historical perspectives in the development of American education. Special focus on differing interpretations of school and society relationships.

**EDF 5850 International Development Education: Historical and Contemporary Reality (3).** Designed to explore the relationship between education and the modernization/development process. Special emphasis on historic/contemporary educational planning models.

**EDF 5852 Educational Development Issues in Context: A Multidisciplinary Perspective (3).** A critical analysis of educational reforms of the past and the present, drawing on social science research and policy issues in the Third World. Prerequisite: EDF 5850.

**EDF 5880 Intercultural Education: National and International Perspectives (3).** Analysis of concepts and programs of intercultural and international education, consideration of the role of education in fostering intercultural understanding both nationally and internationally.

**EDF 5905 Directed Study in Education (1-3).** The student plans and carries out an independent study project under direction. Topics are to directly relate to content of education courses. Independent study may not substitute for regular course offerings. Prerequisites: Written permission of the chairman of the Division and the approval of the instructor.

**EDE 5941 Practicum I in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate and admitted to Urban Education program.

**EDE 5942 Practicum II in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate.

**EDE 5943 Practicum III in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate.

**EDF 5555 Field Study Abroad (3-6).** Development of international and cross-cultural understandings of educational philosophies and systems through planned travel and study abroad.

**EDF 6211 Psychological Foundations of Education (3).** An advanced survey course designed to acquaint students with major theories and basic principles of learning, instruction, human development, personality and motivation.

**EDF 6212 Research Problems In Educational Psychology (3).** Critical analysis of research trends and topics in educational psychology with specific relevance to counseling, school psychology, or special education. Students prepare a prospectus for thesis.

**EDF 6215 Application of Learning Theory to Instruction (3).** Analysis of selected learning theories and application of these theories to an instructional system.

**EDF 6403C Quantitative Foundations of Educational Research (3).** Integrative coverage of fundamentals in the general field of educational research with emphasis on utilizing computer for data analysis. Prerequisites: EDF 5481 and EDF 6486, and STA 5163 or STA 6113.

**EDF 6444 Non-Biased Assessment of the Culturally Different (3).** Issues in the development and use of assessment procedures designed to avoid

bias against an individual's cultural, linguistic, or ethnic background.

**EDF 6475 Qualitative Foundations of Educational Research (3).** Introduction to philosophical, historical, sociological, and other methodologies as aspects of qualitative educational research. Prerequisites: EDF 5481 and EDF 6486.

**EDF 6486 Research Methods in Education: Experimental Design and Analysis (3).** Competencies required for the design and analysis of complex educational problems, including formulation of pre-experimental, true experimental, quasi-experimental, and factorial designs; and related analysis. Prerequisite: EDF 5481.

**EDF 6651 International Development Education: Educational Technology, Planning, and Assessment (3).** Introduction to the impact of technology in the delivery and management of education. Emphasis is placed on planning, implementation, and assessment in developing societies.

**EDF 6654 Macro- and Micro-Planning in Education (3).** This course is designed to study the theoretical and methodological foundations of educational planning in the U.S. and other countries.

**EDF 6656 International Development Education: Innovative Approaches in Educational Planning (3).** Introduction to educational planning approaches which stress decentralization. It focuses on new and innovative perspectives which emphasize strategic aspects of educational planning.

**EDF 6658 Selected Topics In International Development Education: Current Policy Issues and Problems (3).** This course is dedicated to the study of contemporary problems and issues in the fields of educational policy, planning, management, implementation, and research in developing societies.

**EDF 6906 Directed Study In International Development Education (3).** Specialized intensive study in areas of interest to International Development Education majors. Prerequisite: Approval of program advisor and instructor.

**EDF 6925 Special Topics In Urban Education (1-5).** An opportunity for school personnel to develop special competencies in teaching in an urban environment. Prerequisite: Permission of instructor.

**EDF 6972 Thesis in International Development Education (3-9).** A thesis is required of students in International Development Education which demonstrates the application of their analytical, conceptual, and technical skills to a specific educational development problem. Prerequisite: Final semester standing in the International Development Education Master's degree program.

**EDF 7934 Seminar In The Social Foundations of Education (3).** Provides a social and philosophical frame of reference reflecting the society in which education occurs and the resulting implications for the functioning of schools. Prerequisites: M.S. or equivalent and at least one graduate course in history, philosophy or sociology, or equivalent.

**EDG 5325 Analysis of Teaching (3).** Examination of the research on instruction in teaching, and the development of skills in the observation and analysis of teacher behavior.

**EDG 5414 Instructional Strategies for the Classroom Teacher (4).** This course is specifically designed for the Modified Master's Program in Education. Focus is on generic teaching strategies suitable for teaching in South Florida. Special Emphasis will be placed on the development of competence and knowledge supportive of a reflective practitioner. Prerequisite: Permission of Instructor.

**EDG 5707 Cultural and Cross-Cultural Studies (3).** Overview of immigration patterns in U.S., discussions of theories of ethnicity, acculturation, intercultural communication. Development of teaching strategies for multicultural classrooms. Multicultural issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**EDG 6250 Curriculum Development (3).** Development of basic technical constructs of curriculum. Planning of reality-based educational programs at all levels of schooling.

**EDG 6286 Curriculum Evaluation and Improvement In Urban School Systems (3).** Development of skills in curriculum evaluation and strategies for improvement of on-going curriculum.

**EDG 6693 Problems In Curriculum and Instruction: Elementary (3).** Investigation of current problems and solutions to essential curricular and instructional issues in elementary education.

Prerequisites: EDE 6205, EDE 6225 or equivalent.

**EDG 6694 Problems In Curriculum and Instruction: Middle School (3).** Investigation of current problems and solutions to essential curricular and instructional issues in Middle School education. Prerequisite: ESE 6215 or equivalent.

**EDG 6695 Problems In Curriculum and Instruction: High School (3).** Investigation of current problems and solutions to essential curricular and instructional issues in high school education. Prerequisite: ESE 6215 or equivalent.

**EDG 6920 Colloquium In Curriculum and Instruction (1-6).** Selected readings, presentations and discussions on topics related to curriculum and instruction. Colloquia considers specific topics related to issues, trends and applications in the broad field of education. Prerequisite: Masters Degree.

**EDG 6925, 6926, 6927, 6928, 6929 Special Topics In General Professional Education (1-3).** Offers an opportunity for school personnel to participate in a problem-oriented workshop in one of the fields of general professional education.

**EDG 6943 Supervised Field Experience (1-5).** Students are provided an opportunity to perform supervisory duties appropriate to the students' professional goals. Only advanced graduate students are permitted to enroll.

**EDG 7222 Curriculum: Theory and Research (3).** Theories of curriculum organization and a survey of curriculum research and historical patterns of curriculum development. Prerequisite: EDF 6250.

**EDG 7362 Instruction: Theory and Research (3).** Theories of instruction and research in the learning process, creativity, the thought process, human relations and group dynamic and other fields related to the development of instructional theory and practice. Prerequisites: EDG 6250 or Psychology of Learning.

**EDG 7391 Seminar In Instructional Leadership (3).** Review theories of change and organizational development applicable to education. Discussion of roles and functions of supervisors, curriculum developers and other leaders in the instructional process. Prerequisites: EDS 6115 or EDS 6050.



**EDG 7665 Seminar in Curriculum (3).** Provides advanced doctoral students the opportunity to participate in a high level seminar focused on identifying the forces which shape curriculum theory and practice. Prerequisite: EDG 7222.

**EDG 7938 Doctoral Seminar in Instructional Leadership (3).** Advanced doctoral studies in current theories and research related to instructional leadership. Prerequisite: EDG 7391.

**EDG 7980 Doctoral Dissertation (6-9).** Original contribution to knowledge in major field. Prerequisite: doctoral candidate.

**EDH 6905 Directed Study in Higher Education (1-6).** Specialized intensive study in higher education and/or community college in areas of interest to the student. Subject to approval of program advisor. Prerequisite: Permission of instructor.

**EDH 6925 Special Topics in Higher Education/Community College (1-6).** Intensive development of selected competencies related to instructional curricular, staff development and/or administrative skills of special interest to students in higher education and community college. Prerequisite: Permission of instructor.

**EDH 6935 Special Topics in Higher Education/Community College (1-6).** This course provides for the examination of special aspects of higher education of interest to students in higher education and community college teaching. Prerequisite: Permission of instructor.

**EDH 7065 Higher Education: Philosophical/Historical Perspectives (3).** This course examines basic philosophical positions in higher education; and the history of American higher education. A contemporary philosophical position is then developed.

**EDH 7204 Higher Education: Community College (3).** This course examines the structure of the community college including: curriculum; administration and legal aspects; the community college concept; technical and career programs and current issues and problems.

**EDH 7225 Higher Education: Developmental Programs (3).** This course examines the spectrum of developmental programs in higher education. Special attention is given to program structure, academic support systems and curricula designed to increase student achievement.

**EDH 7307 Higher Education: Instructional Methods (4).** This course will develop knowledge of and skill in the use of higher education instructional methods, such as lecture, discussion, demonstration, TV instruction, and computer assisted instruction.

**EDH 7980 Doctoral Dissertation, Community College Teaching (6-9).** Research for doctoral dissertation. Prerequisites: Advancement to candidacy in the doctoral program and completion of all other doctoral requirements. Course may be repeated as needed.

**EDS 6050 Supervision and Staff Development (3).** Competencies in supervision and staff development. Focus is on functions, tasks, and job dimensions of educational leaders who serve as supervisors and providers of staff development activities.

**EDS 6115 School Personnel Management (3).** Competencies required of effective school personnel. Focus is on skills needed for exercising leadership in school personnel selection, evaluation, and development.

**EEC 5906 Directed Study in Early Childhood Education (1-3).** Available to undergrad and grad students studying early childhood education. Provides for individual investigation in the area of early childhood education. Permission of instructor required.

**EEC 5926 Special Topics in Early Childhood Education (3).** Available to undergrad and grad students studying early childhood education. Provides opportunities to develop skills and knowledge under the guidance of a specialist in a selected area. Permission of instructor required.

**EEC 6261 Education Programs for Younger Children (3).** Required in masters program in early childhood education. Programs developed for young children; curriculum trends based on contemporary psychological, educational, and sociological research.

**EEC 6678 Research in Early Childhood Education (3).** Elective in masters program in early childhood education. Required for students in doctoral program. Research in early childhood education and the paradigms associated with this research. Prerequisite: EDF 5481.

**EEC 6932 Seminar in Early Childhood Education (3).** Elective in masters program in early childhood education. Required for students in doctoral program. Advanced study of critical issues and problems in preschool

and early childhood education. Prerequisite: EEC 6678.

**EEC 6948 Supervised Experience in Early Childhood Education (3-9).** Available to grad early childhood education majors. Provides field work in educational institutions and organizations involved in childcare and early childhood education. Prerequisite: Permission of Instructor.

**EEC 6971 Thesis in Early Childhood Education (6).** Design and preparation of an original scholarly investigation in early childhood education. Prerequisites: EDF 5481, EEC 6678, and consent of instructor. Corequisite: EEC 6932.

**EEC 7932 Doctoral Seminar in Early Childhood Education (3).** Required for students in doctoral program. Advanced doctoral study of current theories and research related to early childhood education. Topics may vary and may include: social, cognitive, affective and language development. Prerequisite: EDF 6486, EEC 6932.

**EED 6226 Advanced Theory and Practice: Emotional Handicaps (3).** Major theories in the area of behavior disorders, and skills in the application of these theories to education. Prerequisite: EED 4227 or permission of instructor.

**EEX 6051 Exceptional Children and Youth (3).** Significant concepts in relation to the educational needs of exceptional children and youth.

**EEX 6060 Curriculum Planning and Development in Special Education (3).** Historical and theoretical bases for designing, developing, adapting and evaluating curricula for handicapped individuals. Prerequisites: EEX 5481, EEX 6912.

**EEX 6072 Mainstreaming Exceptional Children: Issues and Techniques (3).** Awareness of issues underlying the movement to mainstream mildly handicapped students. Techniques and procedures for effective mainstreaming of these students.

**EEX 6106 Diagnostic Teaching: Acquisition of Language and Reading Skills (3).** Concepts in acquisition and development of language and reading skills.

**EEX 6203 Advanced Psychological/Sociological Aspects of Exceptionality (3).** Advanced psychological and social aspects of handicapping con

ditions in relationship to classroom behavior and community functioning.

**EEX 6208 Medical Aspects of Disability (3).** Medical etiology and remediation of disability. Includes genetic, biochemical, nutritional, and physical agents in retardation, learning handicaps, and emotional illness. Prerequisite: EEX 3202 or equivalent.

**EEX 6211 Assessment of Learning and Behavior (3).** Presents a model for assisting the skills and abilities of exceptional students. Emphasis is on administration, scoring and interpretation of a variety of standardized tests, and communication of results in written reports and oral staffings. Prerequisites: EEX 3221 or equivalent.

**EEX 6227 Diagnostic Teaching: Educational Assessment (3).** Skill in application of assessment theory to classroom diagnosis and to the development of instructional objectives.

**EEX 6250 Reading for Exceptional Students (3).** Provides teachers with knowledge of specific developmental, remedial reading and language arts strategies, assessment and implementation models that can be used with exceptional student populations.

**EEX 6301 Research in Cognitive Process (3).** Review of research and theory pertaining to cognitive development of exceptional individuals. Applications of theory and research include cognitive strategy training and enhancement of attention and memory. Prerequisite: EEX 6165 or DEP 6645.

**EEX 6417 Guidance and Counseling of Gifted Students (3).** Affective development, parental involvement, counseling theories, underachieving gifted.

**EEX 6535 Seminar in Special Education School Administration (3).** This course is designed to provide graduate students an opportunity to study current issues and research in Special Education Administration. The course will focus on: the scope and nature of special education and related services; administrative roles in the organization and operation of special education programs; and management issues in the delivery of effective programs.

**EEX 6771/HME 5255 Independent Living for the Handicapped (3).** Explores personal living skills, employability and transitional skills for adulthood in relation to persons with mental, sensory and physical handicaps.

**EEX 6846 Diagnostic Teaching: Advanced Practicum (3).** Demonstration of diagnostic, curricular, instructional, multidisciplinary, and interpersonal objectives within a variety of field settings.

**EEX 6863 Supervised Field Experience in Special Education (3-9).** Demonstration of the full range of competencies in diagnostic teaching learned throughout the program. Internship placements include a variety of field settings.

**EEX 6906 Directed Study in Special Education (1-6).** Concepts or competencies contracted for by graduate students with an instructor.

**EEX 6927 Special Topics in Special Education (1-6).** Selected competencies in special education, developed in short-term, intensive workshops.

**EEX 6937 Seminars in Special Education (3, repeatable to 9).** Designed to take doctoral students through the steps of completing a dissertation. Requires identification and development of a research problem. Prerequisites: Completion of special education core and research and statistics component.

**EEX 7980 Doctoral Dissertation (6-9).** Original contribution to knowledge in major field. Prerequisite: Doctoral candidate.

**EGC 5305 Educational-Vocational Counseling (3).** Concepts and skills pertaining to vocational development, information systems, career education programs, educational-vocational counseling, and socio-psychological influences on career development.

**EGC 5405 Introduction to Counseling (3).** Major theoretical concepts in counseling, competencies in relationship-building, interviewing, role-playing, simulation, and micro-counseling.

**EGC 5425 Crisis Counseling and Intervention (3).** Prevention and intervention strategies in crisis situations including child abuse and neglect, suicide, substance abuse, AIDS, and personal loss.

**EGC 6203 Measurement and Appraisal in Counseling (3).** Concepts and skills related to the use of tests and other appraisal procedures in counseling. Particular emphasis on career and vocational choice processes. Laboratory experiences included.

**EGC 6469 Counseling the Culturally Different (3).** Concepts and skills involved in counseling clients with back-

grounds different from the majority culture. Prerequisite: EGC 5405.

**EGC 6510 Theories in Group Dynamics (3).** Systematic examination of various theories and relevant research used in study of small group phenomena. Prerequisites: EGC 6725, EGC 6729, EGC 6709.

**EGC 6540 Group Counseling (3).** Exploration of roles and function of group counseling in meeting client needs in a variety of settings. Prerequisites: EGC 5405, EGC 6725, EGC 6726.

**EGC 6560 Advanced Group Development Laboratory (3).** Development of advanced skills in the analysis and understanding of group process, function, and structures through actual observation of an ongoing group. Prerequisites: EGC 6725, EGC 6726.

**EGC 6569 Organization Development in Education (3).** Analysis of theory and practice of organization development and planned change in educational systems. Prerequisites: EGC 6725, EGC 6726, EGC 6709.

**EGC 6605 Professional Problems in Counseling (3).** Competencies in regard to the development of major role and service models and the application of budgeting systems, legal, and ethical standards in a psycho-educational setting.

**EGC 6616 Program Evaluation in Counseling & School Psychology (3).** Evaluation skills in the student's area of specialization, including competencies in designing evaluation proposals and conducting an actual program evaluation. Prerequisite: EDF 5481.

**EGC 6676 Supervised Field Experience in Counseling (10).** Demonstration of the full range of competencies learned throughout the program in Counseling. Internship placements include a variety of field settings.

**EGC 6678 Supervised Field Experience in School Psychology (1-10).** Demonstration of the full range of competencies learned throughout the program in School Psychology. Internship placements include a variety of field settings.

**EGC 6705C Principles of Design in Group Intervention: Role of the Consultant (3).** Focuses on role of leader or trainer in complex training design in leadership and human relations training. Emphasis on Diagnostic and behavioral skills that help groups become

more effective. Prerequisites: EGC 6725, EGC 6726, EGC 6510, EGC 6509.

**EGC 6707C Behavioral and Cognitive Modification Techniques in Counseling and Education (3).** Concepts and skills in using behavior modification, contingency contracting, cognitive behavior management, self-instructional training, problem solving skills and parent and/or teacher consultation.

**EGC 6708C Advanced Counseling and Consultation: Theory and Practice (3).** Extended laboratory experiences stressing the development of behavioral/cognitive intervention skills in short-term counseling and consultation. Prerequisites: EGC 5405 and EGC 6707 or equivalent.

**EGC 6709 Human Interaction III: Organizational Consultation (3).** Theoretical concepts and skills in organizational development and change. Competencies in systems diagnosis and assessment, consultation, agenda setting, team building, decision-making, and feedback. Prerequisite: EGC 6726.

**EGC 6725 Human Interaction I: Group Process and Social Behavior (3).** Concepts, research, and theory relative to small group process. Students will participate in small face-to-face task groups, with an emphasis on developing competencies in diagnosis and intervention in small groups.

**EGC 6726 Human Interaction II: Analysis of Group Participation (3).** Participation in an on-going group with attention given to examination of processes of small group phenomena such as interpersonal communication, norms, decision-making, leadership, authority, and membership. Prerequisite: EGC 6725.

**EGC 6822 Advanced Practicum in Counseling (3).** Advanced competencies in counseling and consultation. Prerequisite: Admission to the Certificate or Degree program.

**EGC 6905 Directed Study in Counseling and School Psychology (1-6).** Competencies contracted for between a student and an instructor in accordance with the student's individual needs.

**EGC 6926 Special Topics in Psychoeducational Services (1-6).** Selected competencies in counselor education or school psychology, developed in short-term, intensive workshops.

**EGC 6936 Special Topics in Counseling and School Psychology (3, repeatable to 9).** Special topics in relation to counseling or school psychology.

**EGI 5051 Nature and Needs of the Gifted (3).** Identification and placement procedures, history of the field, and psychological factors affecting development of the gifted-talented.

**EGI 5232 Educational Procedures and Curriculum for Gifted (3).** Basic curriculum models in education of the gifted. Relation of models to planning, implementation in traditional classrooms, resource rooms, and special classes.

**EIA 5811 Equipment and Facilities Planning (3).** Utilization of research, design, and technical knowledge and skill to plan and update technology education laboratory facilities and equipment. Prerequisite: Graduate standing.

**EIA 5905 Directed Study in Technology Education (1-3).** Identification, research, and reporting on problems of interest to the student in technology education. Subject to approval of program advisor.

**EIA 5925L Special Topics in Technology Education (3).** Selected topics related to instructional and technical areas.

**EIA 6683 Instructional Projects Development in Technology Education (3).** Knowledge and skill in developing new and innovative instructional projects for use in technology education programs, grades 6-12.

**EIA 6931 Analysis of Technology Education (3).** Knowledge of trends, issues, problems in technology education at the national, state, and local levels.

**ELD 6323 Advanced Theory and Practice: Specific Learning Disabilities (3).** Major concepts in the area of specific learning disability, and skills in the application of these concepts to education. Prerequisite: ELD 4240 or permission of instructor.

**EME 5315 Instructional Media (3).** Development of competencies for effective selection and utilization of instructional media. Consideration of sources, selection, evaluation, and methods of implementing media.

**EME 5403 Introduction to Instructional Delivery Systems (3).** A study of the rapidly expanding electronic media technology and its impact on instructional delivery.

Prerequisite: EME 3402 or EME 6405.

**EME 5945 Special Topics in Computer Education (1-3).** Offers an opportunity for teachers and trainers to participate in activities using specific computer applications.

**EME 6405 Computers in the Classrooms (3).** Learning to use microcomputers in a school setting. Emphasis on evaluating and documenting software; creation of classroom materials leading to development of useful software.

**EME 6406 Microcomputers as Teaching Tools (3).** This course develops ability to use the microcomputer as an object, medium, and manager of instruction in the classroom. Prerequisite: EME 6405 or EME 3402 or permission of instructor.

**EME 6407C Instructional Programming for Teachers (3).** An introductory course for teachers to use BASIC to write educational programs appropriate to the teacher's area of specialization. Prerequisite: EME 3402 or EME 6405 or permission of instructor.

**EME 6412 Educational Courseware Evaluation and Development (3).** This course develops ability to select, evaluate, design, and utilize appropriate software for the school curriculum. Prerequisites: EME 6405 or EME 3402 and one computer language or permission of instructor.

**EME 6628 Administrative and Instructional Applications of Technology (3).** Topics of this course include data management, instructional management, teleconferencing, scheduling, and productivity software for educational leaders and school managers.

**EME 6905 Directed Study: Computer Education (1-3).** The course provides an opportunity for the student to plan and carry out an independent study project under direction. Prerequisite: Permission of instructor.

**EMR 6852 Advanced Theory and Practice: Mental Retardation (3).** Major concepts in the area of mental retardation and skills in the application of these concepts to education. Prerequisite: EMR 4251 or permission of instructor.

**ESE 6215 Secondary School Curriculum (3).** Examination of programs, trends, and developments in curriculum and instruction in the secondary school. Consideration and evaluation of innovations.

**ESE 6947 Supervised Field Experience (3-9)(ARR).** Field work in an educational institution or organization. Prerequisite: Consent of Chairperson of the Department.

**EVT 5078 Technical Education in American Society (3).** Knowledge of the basic role and current status of technical education in an industrial democracy. Designed for students interested in post-secondary education.

**EVT 5168 Curriculum Development in Vocational Education (3).** Knowledge and skill in analyzing, planning, and developing curriculum in an area of specialization.

**EVT 5255 Cooperative Vocational Education Programs (3).** Knowledge and skill in the basic philosophy, principles, processes, and procedures of the cooperative method in vocational and technical education.

**EVT 5265 Supervision and Coordination of Vocational Education Programs (3).** Knowledge and skill in the supervision of personnel and the coordination of work to achieve institutional goals.

**EVT 5315 Improvement of Teaching Strategies in Health Occupations and Nursing Education (3).** First in series of graduate courses designed to prepare qualified health professionals holding bachelor's degrees with professional education skills necessary to become competent teachers. Approved for "special methods of teaching health occupations education."

**EVT 5317 Occupational Analyses in Health Occupations and Nursing Education (3).** Provides opportunity to expand/update the knowledge base of health care system combining experiences in health care delivery system with curriculum updating. Professional licensure and liability insurance required. May be repeated.

**EVT 5369 Vocational Educational Media (3).** Knowledge and skill in selecting, developing, and utilizing vocational instructional media forms to communicate or demonstrate concepts.

**EVT 5650 Trends and Issues in Vocational Education (3).** Knowledge of the basic philosophical and curricular trends and issues in vocational technical education at the international, national, state, and local levels.

**EVT 5664 Community Relations and Resources for Vocational Education (3).** Knowledge and skill in utilizing community resources and establishing

public relations procedures and practices to implement vocational education programs.

**EVT 5695 International Comparative Vocational Education (3).** Knowledge in comparison of vocational education in the United States in terms of purposes, systems, and problems with those of selected foreign countries.

**EVT 5769 Evaluation in Vocational and Technical Education (3).** Knowledge and skill in the development of criteria, tests, measurements, and analysis of data to assess teaching, learning, and objectives.

**EVT 5905 Directed Study in Vocational/Technical Education (1-3).** Identification, research, and reporting on a special problem of interest to the student. Subject to approval of program advisor.

**EVT 5925 Special Topics in Vocational Education (1-6).** Selected competencies related to instructional and technical areas.

**EVT 5927 Special Topics in Health Occupations Education (1-3).** Selected topics related to instructional and technical areas.

**EVT 6157 Theory of Work and Careers in Vocational and Technical Education (3).** Knowledge of concepts and principles of work, careers, and technology and related individual, social, and economic benefits with implications for vocational and technical education. Prerequisite: Graduate standing.

**EVT 6264 Administration of Vocational Education Programs (3).** Knowledge of the principles, practices, functions, and roles of administration in the operation of vocational education programs.

**EVT 6318 Current Issues in Health Occupations and Nursing Education (3).** Designed to focus qualified health professions holding a bachelor's degree with professional education skills necessary to identify and conduct research on current issues related to teaching in health occupations education.

**EVT 6359 Vocational Education in a Multicultural Setting (3).** Knowledge and skill in developing and modifying vocational education programs, materials, and practices for a multicultural setting.

**EVT 6760 Research in Vocational Education (3).** Knowledge and skill in identifying, defining, collecting, analyzing,

and synthesizing research-related problems in vocational and adult education.

**EVT 6925 Special Topics in Vocational Education (1-6).** Selected topics related to professional and program areas.

**EVT 6930 Seminar in Vocational Education (3).** Discussion of special instructional, curricular and/or administrative and supervisory problems and issues in vocational education. Prerequisite: Graduate standing.

**EVT 6946 Supervised Field Experience (3-6).** Application and refinement of competencies in either classroom, laboratory, or administration and supervision, via school-based field experiences. Placement is subject to approval of program leader.

**EVT 6947 Internship in Vocational Education (3).** Knowledge and skill in a new leadership setting, relative to the student's selected area of emphasis.

**FAD 5260 Family Development (3).** Dynamics of family interaction and structure, including analysis of socioeconomic and cultural influences, crisis-producing situations, and current issues and trends affecting the family unit.

**FAD 5450 Human Sexuality (3).** Provides a cognitive overview of human sexuality. Main emphasis is on the affective dimension - an exploration of attitudes and values related to sexuality.

**FLE 5895 Bilingual Education Teaching Methodologies (3).** Examination of various approaches to bilingual education, including specific school and classroom organizations. Development of specific instructional strategies for bilingual students. Issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**FLE 5908 Directed Study in Foreign Language Education (1-3)(ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**FLE 5945 Supervised Teaching: Modern Languages (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Master's Track Program and completion of prerequisite coursework in education and subject matter area.

**FLE 6336 Methods of Teaching Modern Language (3).** A modern study of language learning and teaching from the theoretical and practical

points of view, including the evaluation and development of techniques and materials for second language teaching. Prerequisite: LIN 3010 or ENG 3500 or equivalent.

**FLE 6925 Special Topics In Second Language Education (1-3)(ARR).** Production and application of materials and techniques in second language education in a laboratory or field setting.

**FLE 6938 Seminar In Second Language Testing (3).** Advanced study and research on current topics and issues in the field of second language education. Variety of topics to include language testing, language proficiency, language and society, bilingual-bicultural education, and error analysis and the language learner.

**HEE 5335 Trends and Issues in Home Economics Education (3).** Analysis of current social, economic, and educational trends and issues impacting upon home economics education and their implications for current and evolving practices.

**HEE 5360 Teaching Child Development (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5361 Teaching Consumer Education and Family Economics (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5362 Teaching Clothing and Textiles (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5363 Teaching Family Life Education (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5364 Teaching Housing and Home Furnishings (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5365 Teaching Food and Nutrition (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are

current in content and educational strategies.

**HEE 5905 Directed Study In Home Economics Education (1-3).** Designed for advanced students in home economics education who wish to pursue specialized topics. Requires prior approval of instructor.

**HEE 5927 Special Topics In Home Economics Education (1-3).** Development, organization, instruction, evaluation, and administration of programs related to selected aspects of home economics education.

**HEE 6156 Teaching Home Economics In Diverse Environments (3).** Utilization of current educational developments, evolving strategies, materials, and resources to teach and evaluate home economics programs in diverse settings.

**HEE 6915 Research In Home Economics Education (3).** Analysis and application of research pertaining to philosophy, curriculum, evaluation, and teacher education in home economics. Subject to approval of program advisor.

**HEE 6928 Special Topics In Home Economics Education (1-3).** Development, organization, instruction, evaluation, and administration of programs related to selected aspects of home economics education.

**HEE 6937 Seminar In Home Economics Education (3).** Application of selected instructional, curricular, and/or administrative principles and practices to the solution of problems of special interest to home economics educators. Subject to approval of program advisor.

**HME 5225 Problems of Home Management In Contemporary Society (3).** Influence of diversified cultural impact on management life styles, with emphasis on problems of management resources. Discussion of problems related to single-parent homes, retirement, poverty, death, working parents, migrant families, and other human situations. Prerequisites: COA 2410, HME 4230, or permission of instructor.

**HME 5255 Independent Living for the Handicapped (3).** Explores the special home and personal living skills required in order for persons with mental and physical limitations to achieve their maximum independence. Suitable for students in special education, health, physical education, recreation, social work, home economics or

anyone planning to work with elderly or handicapped. Approved for certification for teachers of the mentally retarded.

**HSC 5455 Basic Driver Education (3).** Content includes knowledge of the highway transportation system, rules and regulations. For Driver Education Certification endorsement.

**HSC 5456 Advanced Driver Education (3).** Content includes advanced skills for the teaching of driver's education. Prerequisite: HSC 5455.

**HSC 5465 Administration and Supervision of Driver Safety Education (3).** Content includes competencies for teacher preparation and improvement in driver and traffic safety education. Prerequisites: HSC 5455 and HSC 5456.

**LAE 5415 Children's Literature (3).** Available to undergrad and grad education majors. Provides knowledge and skill in critical analysis of purposes, strategies for teaching and evaluation of children's literature. Prerequisites: RED 4150 and LAE 4314, or their equivalent.

**LAE 5908 Directed Study In English Education (1-3) (ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**LAE 5927 Special Topics In Language Arts (3).** Available to undergrad and grad education majors. Provides opportunities to develop skills and knowledge of reading/language arts instruction. Permission of instructor required.

**LAE 5945 Supervised Teaching: English Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area.

**LAE 6305 Instruction In Early Childhood Language Arts (3).** Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research in pre-school, kindergarten and primary grades. Prerequisite: LAE 4314 or permission of instructor.

**LAE 6355 Instruction In Elementary Language Arts (3).** Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of re-

search in elementary education. Prerequisite: LAE 4314 or permission of instructor.

**LAE 6339 Teaching English in the Secondary School (3).** Analysis of methods, programs, and materials for teaching English in the junior and senior high school, and development of teaching skills. Prerequisite: Undergraduate course in methods of teaching English.

**LAE 6815 Computers in English and the Language Arts (3).** Covers the basics needed to integrate computers in teaching language arts. Emphasizes selecting and learning to use software to meet objectives in language, literature, and composition. Corequisite: English major or equivalent.

**LAE 6925-26 Special Topics in English Education (1-3)(ARR).** Production and application of materials and techniques in English education in a laboratory or field setting.

**LAE 6935 Seminar in English Education (3).** Designed for advanced students, the readings and discussions will focus on policy issues and recent research in English education. Though primarily for experienced English teachers and supervisors, the course is open to administrators and others, with the consent of the instructor.

**LAE 7938 Doctoral Seminar in English Education (3).** Advanced doctoral study of current theories and research related to English education. Prerequisites: LAE 6935, EDF 6486.

**LEI 5440 Program Development in Parks and Recreation (3).** The development of specific programs in parks and recreation with emphasis on special programs for young children, retardates, handicapped persons, and the elderly.

**LEI 5510 Program Administration in Parks and Recreation (3).** A detailed analysis of administrative procedures and responsibilities in connection with parks and recreation facilities and personnel.

**LEI 5595 Seminar in Parks and Recreation Management (3).** A discussion of current problems, issues, and trends in administration of parks and recreation programs.

**LEI 5605 Physical and Social Bases of Parks and Recreation Planning (3).** Concentration on major phases of pre-design, design, development, actualization of park and recreation facilities. Course will explore funding,

budget, site selection, layout, and maintenance.

**LEI 5716 Program Planning in Therapeutic Recreation (3).** This course is designed to prepare the student for the development of systematically designed therapeutic recreation service delivery programs from the viewpoint of the T.R. specialist and the T.R. administrator.

**LEI 5719 Client Assessment, Evaluation and Documentation in T.T. (3).** The course addresses client assessment, documentation and evaluation from the direct service perspective, administrative requirements, and health care regulatory agency demands.

**LEI 5907 Directed Study in Parks and Recreation Management (3).** An opportunity for individuals interested in various aspects of park and recreation administration to work on their own under the close supervision of an advisor. Permission of the instructor is required.

**LEI 6577 Leisure Services Marketing (3).** Advanced application of service marketing principles and practices to both public and private leisure service industry to improve both effectiveness and efficiency of operations.

**LEI 6725 Administrative Aspects of Therapeutic Recreation (3).** An in-depth examination of issues related to the roles and responsibilities of the Activity Therapies/Therapeutic Recreation Administrator.

**LEI 6726 Problems, Issues and Trends in Therapeutic Recreation (3).** An elective that provides an examination of current issues, trends and professionalization concerns in therapeutic recreation.

**LEI 6727 Therapeutic Recreation and Disabling Conditions (3).** Etiology, symptomatology and characteristics of disabling conditions and their implications to therapeutic recreation intervention and treatment. Orientation to health-related disciplines and appropriate terminology.

**LEI 6816 Leisure Education and Facilitation Techniques for Therapeutic Recreation (3).** A focused survey of leisure education and counseling as applied in therapeutic recreation delivery systems.

**LEI 6922 Supervised Field Experiences in Parks and Recreation Administration (3-9).** A practical experience for individuals interested in administrative responsibilities. Permis-

sion of the instructor and Department Chairperson required.

**MAE 5516 Diagnosis and Remediation in Mathematics (3).** Available to undergrad and grad education majors. Provides study of symptoms, causes and consequences of children's math difficulties. Supervised case study included. Prerequisite: MAE 4310.

**MAE 5655 Computers in Mathematics Education (3).** Examines the use of computers (microcomputers) in secondary school mathematics. Designing, evaluating, and using varied types of programs in mathematics classes. Learning to use computers to design mathematics curriculum.

**MAE 5908 Directed Study in Mathematics Education (1-3).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**MAE 5923 Special Topics in Elementary Math Education (3).** Available to undergrad and grad education majors. Provides opportunities to produce and apply materials and strategies in math ed in elem and middle schools.

**MAE 5945 Supervised Teaching: Mathematics Education (6).** Supervised teaching in a middle or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**MAE 6305 Instruction to Early Childhood Mathematics (3).** Refines skills related to program development, methods of teaching, selection of materials and review of research, in pre-school, kindergarten and primary grades. Required in master's program in early childhood education. Prerequisite: MAE 4310 or permission of instructor.

**MAE 6318 Instruction in Elementary Mathematics (3).** Required in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. Prerequisite: MAE 4310 or permission of instructor.

**MAE 6336 Teaching Mathematics in the Secondary School (3).** Analysis of methods, programs, and materials for teaching mathematics in the middle and senior high school, and development of teaching skills. Prerequisites: Undergraduate secondary math methods and permission of instructor.

**MAE 6645C Workshop on Metric Education (1-3).** A workshop on Metric Education: trends, teaching strategies, programs and materials.

**MAE 6745 Current Trends and Issues in Mathematics Education (1-3).** Trends and Issues in Math Curriculum, new textbooks, curriculum development projects; curriculum implementations and evaluations. Trends and Issues in Instruction, new techniques. Trends and Issues in Evaluations. "New tests", Research.

**MAE 6899 Seminar in Mathematics Education (3).** Designed to provide the advanced student with deeper understanding related to mathematics education.

**MUE 5907 Directed Study in Music Education (1-3).** Individual investigation in one or more areas of music education.

**MUE 5928 Special Topics in Music Education (2).** Applications of materials and techniques in music in a laboratory or field setting.

**MUE 5945 Supervised Teaching: Music Education (6).** Supervised teaching. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and the subject matter area.

**MUE 6305 Instruction in Early Childhood Music (3).** Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades.

**MUE 6316 Instruction in Elementary Music (3).** Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education.

**MUE 6345 The Methodology and Analysis of Music Teaching (3).** A data based analysis of methods and programs in the public schools and the development of music pedagogy skills. Reviews current research findings and applies them where applicable to the field of Music Education. Required for the Masters Degree. Prerequisite: Undergraduate Degree.

**MUE 6785 Research in Music Education (3).** A survey of current research and past research trends in music

education. Applied training in techniques of design and data analysis.

**MUE 6815 The Acoustical and Psychological Foundations of Music (3).** Overview of acoustical, psychological and physiological foundations of music as it influences human behavior. Covers musical acoustics, anatomy of human hearing, music perception, reactions, personality, mood and powers of music discrimination. Required for the Master of Science in Music Education degree. Prerequisite: Undergraduate degree.

**MUE 6925-26 Special Topics in Music Education (1-3).** Applications of new, innovative or contemporary materials and/or techniques in music education. May be used for elective credit with permission of the program director.

**MUE 6938 Seminar in Music Education (3).** Seminar topics concerning historic music education programs in the United States and other countries, as well as current issues and problems facing the music educator. Required for the Master of Science in Music Education degree. Prerequisites: Undergraduate degree.

**PEP 5115 Fitness Instruction (3).** The course prepares the student for the American College of Sports Medicine's Fitness Instructor Certification examination. Prerequisite: PET 3351.

**PEP 5116 Exercise Specialists (3).** The course prepares the student for the American College of Sports Medicine's Exercise Specialists Certification Examination. Prerequisites: PET 3351 and PET 5387.

**PEP 5117 Fitness for Older Adults (3).** The course explores the value of physical activity for improving the physical and mental well being of older adults. Emphasis is placed on exercise prescription and supervision of programs for those working with older adults. Prerequisite: PET 3351.

**PET 5216 Sports Psychology (3).** Course will include an analysis of psychological variables which might influence physical performance. Topics to be discussed include personality development, motivation, anxiety, tension, stress, aggression, attribution theory, and social facilitation. The course is intended for prospective physical educators and others interested in motor performance.

**PET 5238 Motor Learning (3).** The emphasis in this course is on current and advanced topics related to motor skill

acquisition. Laboratory practices and applied techniques related to teaching are examined.

**PET 5256 Sociology of Sport (3).** Students will be introduced to basic principles of the sociological bases of sport and will actively engage in a field study involving a particular phase of sport and society.

**PET 5387 Exercise Test Technology (3).** The course prepares the student for the American College of Sports Medicine's Exercise Test Technology Certification examination. Prerequisite: PET 3351.

**PET 5436 Physical Education Curriculum (3).** Examination of objectives, content, methods of teaching, and evaluative techniques in physical education. Emphasis on curriculum development and refinement of teaching skills.

**PET 5625 Sports Medicine (3).** Advanced conditioning techniques, strength and cardiovascular endurance training are presented. The prevention and treatment of overuse injuries are also emphasized. Prerequisite: PET 3351.

**PET 5716 Analysis and Observation of Teaching in Physical Education (3).** Analysis of the teaching-learning process in physical education. Emphasis on systematic observation instruments and guidelines for systematic development of instructional skills.

**PET 5906 Directed Study in Physical Education (1-3).** Students will work independently on a topic concerning some phase of physical education or sport under the guidance of a faculty member. Registration is by permission of advisor.

**PET 5925 Practicum in Physical Education (1-3).** Production and or application of materials and techniques for physical education in a classroom and or field setting.

**PET 5931 Special Topics in Exercise Physiology (1-3).** Designed to present contemporary issues and practices in exercise physiology. Prerequisite: PET 3360.

**PET 5936 Special Topics in Physical Education (1-3).** Designed to present contemporary issues and practices in physical education and sport.

**PET 6597 Survey of Research in Physical Education (3).** Methods and techniques used in research in physical education. Emphasis on effective use of resources and writing techniques.

**PET 6775 Health Fitness Director (3).** Designed to prepare the student for ACSM's Health Fitness Director certification. Prerequisite: PET 3351, PET 5387, PEP 5115, and PEP 5116.

**PET 6785 Exercise Program Director (3).** Designed to prepare the student for ACSM's Exercise Program Director certification examination. Prerequisite: PET 3351, PET 5387, PEP 5115, and PEP 5116.

**PET 6925-27 Practicum in Physical Education (1-3).** Production and or application of materials and techniques for physical education in a classroom and or field setting.

**PET 6932 Seminar in Physical Education (3).** Students will participate in the exploration, examination, and discussion of problems, issues, and trends in physical education and sport.

**PET 6940 Internship in Exercise Physiology: Graduate (3-6).** Clinical experience, supervised by physician, designed to provide the student with competence in exercise prescription and leadership in preventive and rehabilitative outpatient exercise programs. Prerequisites: PET 5387, PEP 5115, and PEP 5116.

**PET 6944 Supervised Field Experience (3-9).** Students may use this course to become involved in an independent study, research project, or any one of a variety of other activities, under the guidance of a faculty member.

**RED 5447 Analysis and Production Reading Materials (3).** Elective in graduate program in reading education. Exploration, creation, and evaluation of basic reading materials, commercial and non-commercial. Prerequisite: RED 4150 or equivalent.

**RED 5448 Teaching Reading by Computer (3).** Elective in graduate program in reading education. Evaluation and creation of computer programs for teaching reading in grades 4-12. No prior computer experience is required.

**RED 5911 Directed Study in Reading Education (1-3).** Elective in reading education. Directed study in area of reading instruction. Permission of instructor required.

**RED 5925 Special Topics in Reading Education (3).** Elective in master's program in reading education. Study in a specified area of reading education.

**RED 6155 Instruction in Elementary Reading (3).** Required in graduate program in elementary and reading education.

Program development, methods of teaching, selection of materials, and review of research in elementary reading education. Prerequisite: RED 4150 or equivalent.

**RED 6247 Organization and Supervision of Reading Program (3).** Elective in graduate program in reading education. Philosophy, design, and operation of public and private reading programs.

**RED 6305 Instruction in Early Childhood Reading (3).** Required in graduate program in early childhood education. Program development, methods of teaching, selection of materials, and review of research, in preschool and early childhood reading education. Prerequisite: RED 4150 or equivalent.

**RED 6336 Reading in the Content Areas (3).** Required in graduate program in reading education. Strategies for developing the reading abilities of students in specific subject areas.

**RED 6515 Programs of Remediation in Reading (3).** Required in graduate program in reading education. Knowledge and strategies necessary to improve students' reading abilities. Prerequisites: RED 6155 or 6305, RED 6546, or their equivalents.

**RED 6546 Diagnosis of Reading Difficulty (3).** Required in graduate program in reading education. Knowledge and strategies necessary to assess students' reading abilities. Prerequisite: RED 6155 or 6305, or its equivalent.

**RED 6747 Research in Reading (3).** Required in doctoral program and reading master's program. Includes reading research critique, methodology, and planning. Permission of instructor required. Prerequisite: EDF 5481.

**RED 6805 Practicum in Reading (3).** Elective in graduate program in reading education. Supervised experience as reading professional in teaching, assessing, supervising, or research role. Prerequisites: RED 6546, RED 6515, RED 6747.

**RED 6845 Clinical Procedures in Reading (3).** Elective in graduate program in reading education. Reading diagnosis, instruction, and reevaluation in a clinical setting. Prerequisites: RED 6515, RED 6546.

**RED 6931 Seminar in Reading Education (3).** Required in doctoral program and thesis track of reading master's program. Elective in standard track. Deals with theory and practice of

reading instruction. Prerequisites: Permission of instructor and RED 6747.

**RED 6971 Thesis in Reading Education (6).** Required in thesis track of reading master's program. Design, implementation, and written report of an original research investigation in reading education. Prerequisites: Advanced graduate standing and consent of instructor.

**RED 7912 Doctoral Directed Study in Reading (1-6).** An elective course in the reading education doctoral program. Directed research in a specified area of reading education. Repeatable. Prerequisite: Admission to reading education doctoral program.

**RED 7938 Doctoral Seminar in Reading Education (3).** Advanced study in current theories and research related to reading education. Prerequisites: RED 6747, RED 6931.

**SCE 5435 Secondary Science Laboratories: Methods & Materials (3).** Increase the quantity and quality of laboratory experiences for secondary students by managing the laboratory safely, selecting appropriate activities, and evaluating student performance.

**SCE 5905 Directed Study in Science Education (1-3).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**SCE 5930 Special Topics in Elementary Science Education (3).** Available to undergrad and grad education majors. Provides knowledge and skills, content, strategies and materials for teaching elementary science. Permission of instructor required.

**SCE 5945 Supervised Teaching: Science Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area.

**SCE 6141 Science Education in Society (3).** This course analyzes the impact of scientific, technological, and social advances upon curriculum and instruction in science education.

**SCE 6245 Science Education for High Achieving Students (3).** Program options, instructional designs and materials, and evaluation of gifted and other high achieving science students will be addressed.

**SCE 6306 Instruction in Early Childhood Science (3).** Elective in masters program in early childhood



education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades. Prerequisite: SCE 4310 or permission of instructor.

**SCE 6315 Instruction In Elementary Science (3).** Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in elementary education. Prerequisite: SCE 4310 or permission of instructor.

**SCE 6635 Teaching Science in the Secondary School (3).** Analysis of methods, programs, and materials for teaching science in the junior and senior high school, and development of teaching skills.

**SCE 6637 Science Education and Community Resources (3).** This course examines the utilization and cultivation of community resources to meet science education goals for various populations.

**SCE 6925-26 Workshop In Science Education (1-3).** Production and application of materials and techniques in science education in a laboratory or field setting.

**SCE 6931 Special Topics In Science Education (3).** An individual topic or limited number of topics not otherwise offered in the curriculum that facilitate science teaching in the elementary school will be selected.

**SCE 6933 Seminar In Science Education (3).** Analysis of research trends and selected topics in science education. Mainly for graduate students in secondary science education. Individual needs and interests will determine the fine structure of the course content.

**SCE 7165 Curriculum Development In Science Education (3).** Analysis of theoretical basis of curriculum development in science education. Evaluation of currently available material. Development and testing of science curriculum materials. Prerequisites: SCE 6933, EDF 6486.

**SCE 7761 Research In Science Education (3).** Application of research methodology to Science Education. Analysis of current research. Development of research proposal in Science Education. Conduct field study. Prerequisites: SCE 6933, EDF 6486, SCE 7165. Corequisite SCE 7938.

**SCE 7938 Doctoral Seminar In Science Education (3).** Advanced doctoral seminar in current theories and research related to science education. Prerequisites: SCE 6933, EDF 6486.

**SPS 6191 Psycho-Educational Assessment I: Intellectual (3).** Competencies in the assessment of intellectual ability and adaptive behavior in children. Corequisite: SPS 6191L for School Psychology majors. No corequisite for other majors.

**SPS 6191L Psycho-Educational Assessment I: Lab (2).** Practical skills in the assessment of intellectual ability and adaptive behavior in children. Corequisite: SPS 6191.

**SPS 6192 Psycho-Educational Assessment II: Process (3).** Competencies in the assessment of psycho-educational processes in children and their relationship to intellectual ability. Corequisite SPS 6192L for School Psychology majors. No corequisite for other majors. Prerequisite: SPS 6191.

**SPS 6192L Psycho-Educational Assessment II: Lab (2).** Practical skills in the assessment of psycho-educational processes in children. Emphasis on assessing disorders in the visual, auditory, haptic, language, and sensory integration areas. Corequisites SPS 6191, SPS 6191L.

**SPS 6193 Psycho-Educational Assessment III: Behavior (3).** Competencies in behavioral and personality assessment of students within the school setting. Emphasis on projective testing and behavioral observations. Corequisite: SPS 6193L. Prerequisites: SPS 6191, SPS 6192.

**SPS 6193L Psycho-Educational Assessment III: Lab (3).** Practical skills in projective and behavioral assessment of students within the school setting. Corequisite: SPS 6193. Prerequisites: SPS 6191, SPS 6192.

**SPS 6805 Professional Problems In School Psychology (3).** Competencies in regard to the development, role and function of school psychologists. General orientation and legal and ethical issues included.

**SSE 5908 Directed Study In Social Studies Education (1-3) (ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**SSE 5929 Workshop In Elementary Social Studies Education (3).** Available to undergrad and grad education majors. Provides knowledge and skills,

content, strategies and materials for teaching social studies. Permission of instructor required.

**SSE 5945 Supervised Teaching: Social Studies Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Modified Masters Track Program and completion of prerequisite coursework in education and subject matter area.

**SSE 6305 Instruction In Early Childhood Social Studies (3).** Elective in masters program in early childhood education. Refines skills related to program development, methods of teaching, selection of materials, and review of research, in preschool, kindergarten and primary grades.

**SSE 6355 Instruction In Elementary Social Studies (3).** Elective in masters program in elementary education. Refines skills related to program development, methods of teaching, selection of materials, and review of research in elementary education.

**SSE 6394 Social Studies In Other Nations (3).** The course will examine the concept of social studies as a subject area in elementary and secondary schools found in both developed and developing nations. Comparisons and contrasts will be made. Prerequisites: SSE 6633, SSE 6939.

**SSE 6633 Teaching Social Studies In the Secondary School (3).** Analysis of methods, programs, and material for teaching social studies in the junior and senior high school, and development of teaching skills.

**SSE 6795 Seminar: Research In Social Studies Education (3).** The course will examine research in social studies education. The course will serve as a lab for developing a dissertation research design. Prerequisite: EDF 5481. Corequisites: EDF 6486, EDF 6403 or EDF 6475.

**SSE 6924 Workshop In Content, Method, and Materials of Teaching Social Studies (1-3).** Focus on content, methods, and materials needed for teaching social studies in the elementary school, K-6.

**SSE 6925-28 Workshop In Social Studies Education (1-3).** Production and application of materials and techniques in social studies education in a laboratory or field setting.

**SSE 6939 Seminar In Social Studies Education (3).** Designed for advanced students, the readings and discussions

will focus on policy issues and recent research in social studies education. Though primarily for experienced social studies teachers and supervisors, the course is open to administrators and others, with the consent of the instructor.

**SSE 7938 Doctoral Seminar in Social Studies Education (3).** Advanced doctoral study in current theories and research related to social studies education. Prerequisites: SSE 6939, EDF 6486.

**TSL 5142 Curriculum Development in English as a Second Language (3).** Description, analysis, planning, design, and evaluation of curriculum in English as a second language (K-adult). Prerequisite: TSL 6341.

**TSL 5371 Special Methods of TESOL (3).** Investigation of modern techniques for the teaching of oral and written communication in English to non-native speakers of English, including the evaluation and development of materials for English to speakers of other languages. Issues in elementary, secondary, adult, vocational, and special education will also be addressed. Prerequisite: LIN 3010.

**TSL 5938 Seminar in Second Language Testing (3).** Advanced study and research on current topics and issues in the field of second language education. Variety of topics to include language testing, language proficiency, language and society, bilingual-bicultural education, and error analysis and the language learner.

## College of Education

Dean I. Ira Goldenberg

Associate Dean for Academic Affairs Robert Vos

Associate Dean for Student and Community Services M. A. Bilbao

Assistant Dean for Budget and Grants Administration Finance Carmen Mendez

Assistant Dean for North Miami Campus/Broward Janice R. Sandford

### Chairpersons

Educational Leadership, and Policy Studies Stephen M. Fain

Educational Psychology and Special Education Donald C. Smith

Health Physical Education and Recreation Ida F. Chadwick

Middle, Secondary, and Vocational Education A. Dean Hauenstein

Elementary Education Alicia Mendoza

Foundations: Urban, Multicultural, International Education S.L. Woods

### Coordinators/Directors

Coordinator of Doctoral Programs Robert Vos

Director of Internship and Student Teaching Karyl Boynton

Director of Student Services Susan H. Lynch

### Faculty

Alvarez, Carlos, M., Ph.D. (University of Florida), Associate Professor, International Development Education, Educational Psychology, Educational Research, Educational Leadership, and Policy Studies

Badla, Arnilda, Ph.D. (University of North Carolina, Chapel Hill), Associate Professor, Modern Language Education, Middle, Secondary, and Vocational Education.

Banya, Kingsley, Ph.D. (University of Toronto), Associate Professor, Curriculum and Instruction, Educational Leadership and Policy Studies

Bath, John B., Ph.D. (Syracuse University), Assistant Professor, Elementary Mathematics and Science Education, Elementary Education

Bilbao, Maria A., M.A. (University of Miami), Associate Dean, Elementary Education, Elementary Education

Boynton, Karyl, M.A. (University of Florida), Director of Internship and Student Teaching

Blucker, Judith A., Ph.D. (Florida State University), Professor, Health and Physical Education, Curriculum and Instruction, and Executive Vice Provost

Campbell, Richard, Ed.D. (Indiana University), Professor, Science Education, Curriculum and Instruction, Dean of Graduate Studies

Carpenter, John A., Ph.D. (University of Southern California), Professor, Educational Foundations, Foundations: Urban, Multicultural, International Education

Chadwick, Ida F., Ph.D. (Florida State University), Associate Professor and Chairperson, Physical Education, Health, Physical Education and Recreation

Chang, David Y., M.A. (Florida International University), Assistant Professor, Art Education, Middle, Secondary, and Vocational Education

Cheyney, Wendy, Ed.D. (University of Miami), Associate Professor, Special Education for Learning Disabilities, Educational Psychology and Special Education

Cistone, Peter J., Ph.D. (Pennsylvania State University), Professor, Educational Leadership, Educational Leadership and Policy Studies

Cook, Joseph B., Ed.D. (University of Florida), Professor, Community College Teaching, Foundations: Urban, Multicultural and International Education

Crabtree, Myrna P., Ed.D. (Teachers College, Columbia University), Professor, Home Economics Education, Middle, Secondary, and Vocational Education

DeFrancesco, Charmaine, Ph.D. (Florida State University), Assistant Professor, Physical Education, Health Physical Education and Recreation

Dimldjian, Victoria J., Ph.D. (University of Pittsburgh), Professor, Early Childhood Education, Elementary Education

Divita, Charles, Jr., Ph.D. (Florida State University), Professor, Adult Education and Human Resource Development, Educational Leadership and Policy Studies

Evans, Anna M., Ph.D. (Iowa State University), Assistant Professor, Social Studies Education, Global Education, Middle, Secondary, and Vocational Education

- Fain, Stephen M., Ed.D.** (*Teachers College, Columbia University*), Professor and Chairperson, Curriculum and Instruction, Educational Leadership and Policy Studies
- Farouk, Mohammed, Ed.D.** (*West Virginia University*), Assistant Professor, Social Studies Education, Elementary Education
- Farrell, Robert V., Ph.D.** (*Teachers College, Columbia University*), Associate Professor and Chairperson, Social Foundations of Education, Foundations: Urban, Multicultural, and International Education
- Fine, Joyce, Ed.D.** (*Florida International University*), Assistant Professor, Reading and Language Arts Education, Elementary Education
- Fisher, Allen, Ph.D.** (*University of Connecticut*), Associate Professor, Educational Leadership, Educational Leadership and Policy Studies
- Gallagher, Paul D., Ph.D.** (*Florida State University*), Associate Professor, Educational Research, Educational Leadership and Policy Studies, and Vice President for North Miami Campus
- Gavilan, Marisel, Ed.D.** (*University of Tennessee*), Associate Professor, Educational Psychology and Bilingual Education/TESOL, Educational Psychology and Special Education
- Gay, Lorraine R., Ph.D.** (*Florida State University*), Professor, Educational Research, Educational Leadership and Policy Studies
- Gilbert, Robert K., Ph.D.** (*University of Minnesota*), Associate Professor, Mathematics Education, Elementary Education
- Goldenberg, I. Ira, Ph.D.** (*University of Connecticut*), Professor, Urban, Multicultural and Community Education and Dean
- Greenberg, Barry, Ph.D.** (*New York University*), Professor, Educational Research and Community College Teaching, Educational Leadership and Policy Studies
- Grosse, Christine Uber, Ph.D.** (*University of North Carolina, Chapel Hill*), Associate Professor, TESOL, Foundations: Urban, Multicultural, and International Education
- Hauenstein, A. Dean, Ph.D.** (*Ohio State University*), Professor and Chairperson, Vocational Education, Technology Education, Middle, Secondary, and Vocational Education
- Kaplan, E. Joseph, Ph.D.** (*Florida State University*), Assistant Professor, Foundations of Education, Foundations: Urban, Multicultural, and International Education
- Kennedy, Daniel A., Ed.D.** (*University of Oregon*), Associate Professor, School Counseling, Educational Psychology and Special Education
- Kossack, Sharon Wall, Ph.D.** (*University of Georgia*), Professor, Reading and Language Arts Education, Elementary Education
- Lazarus, Phillip J., Ph.D.** (*University of Florida*), Associate Professor, Educational Psychology and School Psychology, Educational Psychology and Special Education
- Lopez, Richard, Ed.D.** (*Florida Atlantic University*), Associate Professor, Exercise Physiology, Health, Physical Education, and Recreation
- Lucky, Luretha, Ed.D.** (*Arizona State University*), Associate Professor, Special Education for Mental Retardation, Educational Psychology and Special Education
- Lynch, Susan H., M.S.** (*Florida State University*), Early Childhood Education, Director of Student Services
- Marshall, Nancy, Ph.D.** (*Cornell University*), Associate Professor, Reading and Language Arts Education, Elementary Education
- Martinez-Perez, Luis A., Ph.D.** (*Florida State University*), Associate Professor and Chairperson, Science Education, Middle, Secondary, and Vocational Education
- Mathewson, Grover, Ph.D.** (*University of California at Berkeley*), Associate Professor, Reading and Language Arts Education, Elementary Education
- McClintock, C. Edwin, Ed.D.** (*University of Georgia*), Professor, Mathematics Education and Computer Education, Middle, Secondary, and Vocational Education
- Mendez, Carmen, MPA** (*Florida International University*), Public Administration, and Assistant Dean for Budget and Grants Administration
- Mendoza, Alicia, Ed.D.** (*University of Miami*), Associate Professor and Chairperson, Early Childhood Education, Elementary Education
- Miller, Lynne Ph.D.** (*University of Arizona*), Assistant Professor, Reading and Language Arts, Elementary Education
- Mohamed, Dominic A., Ph.D.** (*University of Minnesota*), Associate Professor, Vocational Administration and Supervision and Vocational Education, Middle, Secondary, and Vocational Education
- Morrison, George S., Ed.D.** (*University of Pittsburgh*), Professor, Early Childhood Education, Elementary Education
- Nathanson, David E., Ph.D.** (*University of Minnesota*), Professor, Special Education for the Gifted/Mental Retardation, Educational Psychology and Special Education
- Novoa, Liorana M., Ed.D.** (*Harvard University*), Assistant Professor, Special Education, Educational Research, Educational Leadership and Policy Studies
- O'Brien, George E., Ph.D.** (*University of Iowa*), Assistant Professor, Science Education, Middle, Secondary, and Vocational Education
- Pearson, George B., Ed.D.** (*University of Oregon*), Professor, Physical Education, Health, Physical Education and Recreation
- Pell, Sarah W. J., Ed.D.** (*Duke University*), Associate Professor, Educational Leadership, Educational Leadership, and Policy Studies
- Pennington, Clement, Ed.D.** (*Pennsylvania State University*), Associate Professor, Art Education, Middle, Secondary, and Vocational Education
- Pugh, Steven, Ph.D.** (*Florida State University*), Assistant Professor, Physical Education, Health, Physical Education and Recreation
- Reichbach, Edward M., Ed.D.** (*Wayne State University*), Associate Professor, Elementary Education, Elementary Education
- Rosenberg, Howard, Ed.D.** (*Teachers College, Columbia University*), Associate Professor, Special Education for Mental Retardation, Educational Psychology and Special Education
- Ryan, Colleen A., Ph.D.** (*Ohio State University*), Associate Professor, Special Education for the Emotionally Handicapped, Foundations: Urban, Multicultural, and International Education
- Sandiford, Janice R., Ph.D.** (*Ohio State University*), Associate Professor, Health Occupations Education and Computer Education, Middle, Secondary, and Vocational Education, and Assistant Dean for North Miami Campus/Broward
- Shostak, Robert, Ph.D.** (*University of Connecticut*), Professor, English Education and Computer Education,

*Middle, Secondary, and Vocational Education*

**Skalko, Thomas, Ph.D.** (*University of Maryland*), *Therapeutic Recreation, Health, Physical Education and Recreation*

**Smith, Donald C., Ph.D.** (*Syracuse University*), *Professor, Educational Psychology, School Psychology, Counselor Education and Chairperson, Educational Psychology and Special Education*

**Smith, Douglas H., Ph.D.** (*Ohio State University*), *Associate Professor, Adult Education and Human Resource Development, Educational Leadership and Policy Studies*

**Strichart, Stephen S., Ph.D.** (*Yeshiva University*), *Professor, Special Education for Learning Disabilities, Educational Psychology and Special Education*

**Testa, Robert F., Ph.D.** (*University of Miami*), *Associate Professor, Music Education, Elementary Education*

**Toomer, Jethro, Ph.D.** (*Temple University*), *Professor, Educational Psychology and Community Counseling, Educational Psychology and Special Education*

**Tucker, Jan L., Ph.D.** (*Indiana University*), *Professor, Social Studies Education and Global Education, Middle, Secondary, and Vocational Education*

**Vos, Robert, Ed.D.** (*Rutgers University*), *Associate Professor and Associate Dean, Organizational Training, Technical Education, and Vocational Education, Middle, Secondary, and Vocational Education*

**Wagner, Michael J., Ph.D.** (*Florida State University*), *Professor, Music Education, Middle, Secondary, and Vocational Education*

**Walker, Judith Jones, Ph.D.** (*University of Miami*), *Assistant Professor, Counselor Education, Educational Psychology, Educational Psychology and Special Education*

**Wolff, Robert M., Ph.D.** (*Ohio State University*), *Associate Professor, Parks and Recreation Management, Health, Physical Education and Recreation*

**Woods, Sandra L., Ed.D.** (*Rutgers University*), *Associate Professor, Foundations: Urban, Multicultural, International Education*

## College of Engineering and Design

**Gordon R. Hopkins, Dean**

**Gustavo A. Rolig, Associate Dean**

**Lourdes A. Meneses, Assistant to the Dean**

**Nell Hout-Cooper, Director of Information Systems and External Programs**

**Iraj E. Majzub, Director, School of Design**

The College of Engineering and Design is composed of two schools committed to the development of professionals who will serve the community in a wide variety of fields. In addition, there are two units in the College solely devoted to research and other creative activities.

A Doctoral Degree can be earned in the field of Electrical Engineering.

Master's Degrees can be earned in the following fields of study:

- Civil Engineering
- Computer Engineering
- Construction Management
- Electrical Engineering
- Environmental Engineering
- Environmental and Urban Systems
- Industrial Engineering
- Landscape Architecture
- Mechanical Engineering

The programs of the College are directed towards the practical use of scientific, engineering and technical principles to meet the objectives of industry, business, government and the public.

The College provides each student with the opportunity to develop marketable skills and to obtain an education which will prepare him or her for a rewarding career and personal growth.

Underlying the programs of the College is a recognition that the growing impact of technology upon the quality of life is growing and that the proper application of technology is critical to meeting current and emerging human needs.

The College is actively engaged in a number of special programs as a service to the community and the University. One of these activities is the International Association for Housing Science, an organization with membership from more than 20 nations, dedicated to improving housing technology and production, as well as studying the inter-disciplinary aspects of housing.

The College faculty is actively engaged with business, industry and government. Faculty members are participating in a variety of applied research projects in such areas as energy, transportation, solid waste disposal, biomedical devices and instrumentation, water resources, computer engineering, artificial intelligence, manufacturing, robotics, telecommunications, micro-electronics, structural systems biotechnology, etc.

## School of Engineering

**Gordon R. Hopkins, Dean**

**Gustavo A. Rolig, Associate Dean**

**Lourdes A. Meneses, Assistant to the Dean**

**Nell Hout-Cooper, Director of Information Services and External Programs**

### Doctor of Philosophy

The School offers a Doctor of Philosophy degree in Electrical Engineering. Areas of study include: Biomedical Engineering, Micro-Electronics, Communications, Computer Engineering, Systems and Controls, Electromagnetics, Power Systems, Digital Signal and Image Processing.

### Master of Science Degree Programs

The School offers Master of Science degrees in Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering. The various curricula for the School are designed to give the student an education for entry into the profession of engineering.

Prospective graduate students should refer to the appropriate section of the catalog, or contact the graduate advisor in either program.

**Note:** The programs, policies, requirements and regulations listed in the catalog are continually subject to review. In order to serve the needs of the University's various policies, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advanced notice.

Florida International University and the College believe in equal opportunity practices which conform to all laws against discrimination and are committed to non-discrimination with respect to race, color, creed, age, hand-

icap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary to achieve the equalization of educational and employment opportunities.

### Accreditation

The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) accredits college engineering programs on a nationwide basis. Accreditation is important in many areas of the engineering profession. Students wishing more information about accreditation should consult their departmental office or the Office of the Dean. The following engineering baccalaureate programs are ABET accredited: Civil, Electrical, Industrial and Mechanical.

### Academic Support Services

The area of academic support services is responsible for the coordination of academic advising and student service activities for the college. This area is also responsible for keeping students informed on educational opportunities such as scholarships, tuition waivers, internships, co-op studies and campus resources; serves as a liaison between the academic departments and the student support services university wide; facilitates the registration process in order to make sure that the students adhere to the colleges guidelines.

A student who has been accepted to a degree program in the College must consult an advisor prior to the first class enrollment. An advisor may be assigned by contacting the Chairperson of the Department in which an academic major is desired. Continued contact (at least once per semester) with the advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

Courses taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DF" or "DF".

### Academic Appeal Procedures

Academic Appeals not covered under the Academic Misconduct Policy shall be processed in the following manner:

Step 1. The student and faculty member will meet informally in an attempt to resolve the problem within 45 days of the alleged occurrence.

Step 2. If the informal meeting does not result in an acceptable remedy, the student can appeal in writing to the Department/Divisional Chairperson

within ten days of the informal meeting. The written appeal should include the nature and conditions of the problem and a summary of the informal meeting with the faculty member involved.

Within ten days of the receipt of the written appeal, the Chairperson, student, and faculty member will meet in an attempt to resolve the problem.

Step 3. If the results from the meeting in Step 2 is not acceptable, the student can appeal in writing to the Dean of the College within ten days. The written appeal should include the nature and conditions of the problem and a summary of the meetings in Step 1 and in Step 2.

Within ten days of the receipt of the written appeal, the Dean will meet with the Chairperson, the student, and the faculty member in an attempt to resolve the problem.

The Dean will provide a written decision within ten days of the meeting in Step 3.

The Dean's decision is final.

## Civil and Environmental Engineering

**L. David Shen**, Associate Professor and Acting Chairperson

**Dongzhou Huang**, Visiting Research Associate

**Jian Huang**, Visiting Research Associate

**Luis A. Prieto-Portar**, Professor

**Lambert Talli**, Professor

**Zonghong Tang**, Visiting Lecturer

**Bernin Tansel**, Assistant Professor

**Leroy E. Thompson**, Professor

**Fernando Tinoco**, Visiting Professor

**Okta Ural**, Professor

**Ton-Lo Wang**, Associate Professor

**Fang Zhao**, Assistant Professor

### Graduate Programs

**Ton-Lo Wang**, Graduate Studies Coordinator

The Department of Civil and Environmental Engineering offers advanced study for the degree of Master of Science. The areas of specialty are Structures, Mechanics, Geotechnical, Construction, Transportation, Water Resources, and Environmental Engineering. The degree will be a Master of Science in Civil Engineering or a Master of Science in Environmental Engineering depending upon the area of selected graduate study.

## Master of Science in Civil Engineering

The Master of Science program in Civil Engineering emphasizes course work as well as research. The student is generally encouraged to specialize in a defined area of civil engineering, but also find it desirable to pursue a more general program of studies combining subject material from different areas of specialization and interdisciplinary related courses.

The graduate degree is offered to prepare qualified students for the professional practice of civil engineering. The degree is available in a thesis or non-thesis program. The thesis program entails a minimum of six credits for the successful completion of the research and thesis. The non-thesis program must be supported by the successful completion of a project and a report of substantial engineering content for a minimum of three credits. A student must satisfactorily complete a minimum of 36 semester credits of acceptable graduate coursework which includes a minimum of 12 credits of graduate courses in the specialty area.

## Master of Science in Environmental Engineering

A Master of Science in Environmental Engineering is available to persons interested in graduate work in Environmental Engineering. The program is designed to give graduate students a broad base of knowledge on environmental engineering and on problem solving while encouraging them to pursue individual interests. Thus, the curriculum has a common core of courses but is flexible enough to permit an interdisciplinary approach, if so desired, and allows the student to pursue his or her career goals.

A proposed program of studies will be developed at the time of admission or no later than at the end of the student's first semester. The applicant should hold a Bachelor's degree in engineering, the natural sciences, or a related field. Students who do not meet the stated criteria as developed by the faculty may be considered for admission if they complete the required prerequisites and satisfy any deficiencies.

## Master of Science in Environmental and Urban Systems

This program prepares the student to practice urban and regional planning, as a discipline to address social, physi-

cal, and economic problems of neighborhoods, cities, suburbs, metropolitan areas, and larger regions. The student must identify problems and opportunities, devise alternative policies or plans and effect their implications.

## Admission Policies for all Graduate Programs

A student seeking admission into the graduate program must have a bachelor's degree or equivalent from an accredited institution or, in the case of foreign students, an institution recognized in its own country as preparing students for further study at the graduate level. All graduate applicants, regardless of previous grade point average or degrees, are required to submit their GRE (general) scores. An applicant must present:

1. A "B" average in upper level undergraduate work, or a 3.0 GPA.
2. A combined score of 1000 or higher on the verbal and quantitative sections of the Graduate Record Examination (GRE).

Grades earned at an institution with non-traditional grading systems will be given every consideration and applicants will be treated equally with students from institutions with traditional grading systems.

Foreign students are admitted as governed by University Admission rules and Board of Regents Rule 6C-6.09:

1. Eligible students may be accepted at the appropriate level subject to space and fiscal limitations.
2. In addition to University admission requirements, foreign students must meet the following requirements as a minimum:
  - a. The applicant shall be academically eligible for further study in his or her own country.
  - b. The applicant whose native language is other than English shall demonstrate proficiency in the English language by presenting a score of 550 or higher on the Test of English as a Foreign Language (TOEFL).

## Application Procedures for all Graduate Programs

A student planning to enroll in the graduate program must complete the following:

1. Submit a Graduate Application for Admission to the Admissions Office. Application forms will be mailed upon request.
2. Have a copy of the official transcripts of all previously earned college or university credits sent from the

applicant's former institution(s) to the Admission Office.

3. Submit scores on the Graduate Record Examination (GRE).

4. Foreign students must submit TOEFL scores.

5. It should be emphasized that the admission cannot be acted upon until all of the documents and credentials have been received.

### Degree Requirements

To be eligible for a Master's degree a student must:

1. Satisfy all University requirements for a Master's degree.

2. Meet all undergraduate deficiencies, the requirements of the core or the requirements of an approved program of study, or both. This program of study is developed by the student and his or her advisor and must be approved by the Supervisory Committee and by the Coordinator of the Program.

3. Complete a minimum of 36 semester hours of acceptable graduate level courses.

4. Earn a minimum average of 3.0 in all approved courses in the student's program of study.

5. Complete an acceptable thesis or an engineering project.

6. Pass an oral examination that includes an oral defense of the thesis.

7. Master's degree students in Environmental Engineering must, in addition;

a. Take ENV 6615 Environmental Impact Assessment.

b. Select, with advisor approval at least two courses from the following:

- EES 5506 Occupational Health
- EES 5605C Noise Control Engineering
- ENV 5105 Air Quality Management
- ENV 5356 Solid Wastes
- ENV 5666 Water Quality Management

c. Take a mathematics course as determined by the advisor for the thesis or project.

d. Take at least one credit of ENV 6935 Environmental Graduate Seminar.

e. Complete a minimum of nine credit hours of courses at the 6000 level.

f. Complete eight credit hours of ENV 6971 Thesis, or two credits of ENV 6916 Engineering Project.

### Grades and Credits

No course in which a grade below a 'C' is earned may be counted toward the Master of Science in Civil Engineering or in Environmental Engineering.

### Transfer Credit

The student may receive permission to transfer up to a maximum of six semester hours of graduate credit provided that: (1) the course(s) were taken at the graduate level at an accredited college or university; (2) grade(s) of 'B' or higher; (3) the course(s) are judged by the faculty advisor, Supervisory Committee, or Coordinator of the Program; (4) the credits were not used toward another degree; and (5) the credit(s) were completed within seven years immediately preceding the awarding of the degree.

Credit is not transferable until the student has earned 12 semester hours in the Civil Engineering or Environmental Engineering programs.

### Time Limit

All work applicable to the Master's degree, including transfer credit, must be completed within seven years immediately preceding the awarding of the degree.

## Course Descriptions

### Definition of Prefixes

CES-Civil Engineering Structures; CEG-Engineering General, Civil; EGM-Engineering, Mechanics; EGN-Engineering, General; ENV-Engineering, Environmental; SUR-Surveying and Related Areas; TTE-Transportation and Traffic Engineering

**CCE 5035 Construction Engineering Management (3).** Course will cover construction organization, planning and implementation; impact and feasibility studies; contractual subjects; liability and performance; the responsibility of owner, contractor and engineer. Prerequisite: Permission of Instructor.

**CCE 5505 Computer Integrated Construction Engineering (3).** Course covers the discussion of available software related to Construction Engineering topics; knowledge based expert systems and their relevance to construction engineering planning and management. Prerequisite: Permission of instructor.

**CEG 5065C Geotechnical Dynamics (4).** Analytical, field, and laboratory techniques related to vibration problems of foundations, wave propagation, behavior of soils and rocks, earth dams, shallow and deep foundations. Earthquake engineering. Prerequisite: CEG 4011.

**CEG 6017 Theoretical Geotechnical Mechanics (3).** A continuum

mechanics interpretation of geotechnical engineering: soil rheology; theories of yielding; failure and plastic stability. Analytical and numerical modeling of non-linear properties. Prerequisites: CEG 4012C and MAP 3302. Suggested corequisite: MAP 4401.

**CEG 6105 Advanced Foundations Engineering (3).** Computer applications involving the numerical analysis and design of complex soil-structure interactions: highway and airfield pavements, deep foundation groups and NATM tunnelling techniques. Prerequisite: CEG 4012C.

**CES 5106 Advanced Structural Analysis (3).** Extension of the fundamental topics of structural analysis with emphasis on energy methods and methods best suited for non-prismatic members. Prerequisite: CES 4101.

**CES 5565 Computer Applications In Structures (3).** Discussion and application of available computer programs, techniques and equipment for the analysis, design and drafting of structures. Prerequisites: CES 4605 and CES 4702.

**CES 5606 Advanced Structural Steel Design (3).** Extension of the analysis and design of structural elements and connections for buildings, bridges, and specialized structures utilizing structural steel. Prerequisites: CES 4101, CES 4605.

**CES 5715 Prestressed Concrete Design (3).** The behavior of steel and concrete under sustained load. Analysis and design of pre-tensioned and post-tensioned reinforced concrete members, and designing these members into the integral structure. Prerequisite: CES 4702.

**CES 5800 Timber Design (3).** The analysis and design of modern wood structures. Effect of plant origin and physical structure of wood on its mechanical strength; fasteners and their significance in design.

**CES 6706 Advanced Reinforced Concrete Design (3).** The analysis and design of reinforced concrete and masonry structural systems to formalize the student's knowledge of the behavior of structural components into a final integrated structure. Prerequisites: CES 4101, CES 4702, CEG 4011.

**CGN 5905 Directed Independent Study (1-3).** Individual conferences, assigned readings, and reports independent investigations selected by the student and professor with approval of advisor.

**CGN 5930 Advanced Special Topics in Civil Engineering (1-3).** A course designed to give groups of students an opportunity to pursue special studies in an advanced topic of Civil Engineering not otherwise offered. Prerequisite: Permission of instructor.

**CGN 5935 Professional Engineering (Civil) Review (4).** Prepares qualified candidates to take the P.E. written examination in the field of Civil Engineering. Reviews hydraulics, hydrology, water supply and wastewater, geotechnics, structures, concrete and steel design, etc.

**CGN 6916 Engineering Project (1-3).** Independent research work culminating in a professional practice oriented report for the requirements of the non-thesis option of the M.S. degree. Prerequisites: Fifteen graduate credits and approved project plan.

**CGN 6939 Graduate Seminar (1-3).** An examination of recent technical findings in selected areas of concern. Emphasis is placed on presentations (oral and written), research activities, readings, and active discussions among participants. Prerequisite: Permission of graduate's advisor.

**CGN 6971 Thesis (1-6).** The student following the thesis option of the Master's degree will pursue research through this course. The research work will culminate with an acceptable thesis. Prerequisite: Permission of graduate's thesis advisor.

**CWR 5235 Open Channel Hydraulics (3).** Theoretical treatment and application of hydraulics. Flow in open channels with special reference to varied flow, critical state hydraulic jump, and wave formation. Prerequisites: EGN 3353 and ENV 3621.

**CWR 6117 Statistical Hydrology (3).** Quantitative determination of surface water run-off from a statistical approach. Prerequisites: CWR 3201 and CWR 3103.

**CWR 6125 Groundwater Hydrology (3).** Groundwater occurrence, movement, hydraulics, and application to groundwater flow, including saltwater intrusion, groundwater recharge and drainage, seepage through earth dams. Prerequisites: CWR 3201 and CWR 3103.

**CWR 6126 Advanced Groundwater Hydraulics (3).** Groundwater flow through porous medium. Velocity holograph, conformal mapping, Schwartz-Christoffel transformation,

numerical methods. Prerequisite: CWR 6125.

**EES 5135 Water Quality Indicators (3).** Ecological studies of micro and macro organisms which are indicators of water quality. Emphasis of bioassays and early warning systems. Prerequisite: Permission of instructor.

**EES 5137 Biological Monitoring of Freshwater Ecosystems (3).** The use of aquatic insects and other invertebrates to monitor changes in the aquatic environment. The ecological aspects of aquatic insects in relation to pollution stress are assessed. Prerequisite: EES 5135 or permission of instructor.

**EES 5605 Noise Control Engineering (3).** Fundamentals of sound and noise. Health hazards and other effects. Measurement and noise control in transportation, construction, and other environments. Prerequisite: Admission to graduate program.

**EES 6506 Environmental and Human Factors (3).** Effects, assessment and control of physical and chemical factors in the natural and man-made environments, including noise, electromagnetic radiation, air and water pollution, public and occupational health, vector control, communicable diseases. Prerequisite: Admission to graduate program.

**EES 6508 Occupational Health and Toxicology (3).** A continuation of EES 5506. Investigation of toxic substances in air, water, and food in the industrial environment. Prerequisite: EES 5506.

**EGM 5111 Experimental Stress Analysis (3).** Course covers the necessary theory and techniques of experimental stress analysis and the primary methods employed: brittle coating, strain gauges, photoelasticity and Moire. Prerequisites: EGM 3520, EGM 5653.

**EGM 5351 Finite Element Methods in Mechanics (3).** Matrix techniques and variational methods in solid mechanics; single element, assemblage and generalized theory; non-linear analysis; applications in structural and soil mechanics, torsion, heat conduction and hydro-elasticity, etc. Prerequisite: EGM 3520.

**EGM 5421 Structural Dynamics (3).** Fundamentals of free, forced, and transient vibration of singles and multi-degree of freedom structures, including damping of lumped and distributed parameters systems. Prerequisite: MAP 3302. Corequisite: EGM 5533.

**EGM 5533 Advanced Mechanics of Materials (3).** Extension of the fundamental principles of engineering mechanics to include curved beams, warping, stability, etc. Prerequisites: CES 4101, MAP 3302.

**EGM 5653 Theory of Elasticity (3).** An advanced course covering the concepts of stress and strain tensors, indicia notation, transformation of stresses, compatibility equations, the stress function and the closed form solution of some important continuum mechanics problems. Prerequisites: EGM 3520, MAP 3302.

**EGM 6675 Advanced Plasticity (3).** Formulation of the plastic stress-strain relationships; Prandtl-Reuss equations; yield criteria; Plane Plastic Flow and the Plane Slip Line Field Theory; limit analysis and basics of creep. Prerequisite: EGM 3520.

**EGM 6736 Theory of Elastic Stability (3).** Course will cover the beam-column problem; elastic and inelastic buckling of bars and frames; review of experimental work and design formulas; buckling of rings, curved bars and arches; bending and buckling of thin plates and thin shells. Prerequisites: EGM 3520.

**EGM 6796 Theory of Plates and Shells (3).** A course covering the concepts of thin plates with small deflections; thin plates with large deflections; thick plates; the Membrane theory of Shells; and the General Theory of Cylindrical Shells. Prerequisites: EGM 3520.

**EGN 5455 Numerical Methods in Engineering (3).** Study of procedures that permit rapid approximate solutions, within limits of desired accuracy, to complex structural analysis. Prerequisite: CES 4101.

**EGN 5990 Fundamentals of Engineering (FE) Review (4).** Prepares upper level engineering students to take the Fundamentals of Engineering (FE) State Board examinations. Reviews chemistry, computers, statics, dynamics, electrical circuits, fluid mechanics, mechanic of materials, material science and thermodynamics.

**ENV 5007 Environmental Planning (3).** Ecological principles necessary to preserve a quality environment are presented by means of planning policies, processes, and environmental indicators. Emphasis will be placed on the impact of growth on environmental quality. Prerequisite: Permission of instructor.



**ENV 5008 Appropriate Technology for Developing Countries (3).** The use of appropriate technology in developing countries. Local traditions and adaptations. Local materials in housing, food production, cottage industries. Cooperatives and training.

**ENV 5062 Environmental Health (3).** Study of the control and prevention of environmental-related diseases, both communicable and non-communicable, injuries, and other interactions of humans with the environment. Prerequisite: Permission of the instructor.

**ENV 5065 Vector and Pest Control (3).** Effects and management of public health vectors and communicable diseases. Prerequisite: ENV 5500 or permission of instructor.

**ENV 5105 Air Quality Management (3).** The air pollution problem, principal types, sources and dispersion of pollutants. Physical, economic, and legal aspects of control of atmospheric pollutants.

**ENV 5116 Air Sampling Analysis (3).** Practical laboratory work and theoretical aspects involved in a wide range of air sampling and analysis systems. Critical comparison and examination of methods and instrumentation. Source testing, instrumental sensitivity, applicability and remote sensing systems. Prerequisite: ENV 5105 or ENV 4101.

**ENV 5126 Air Pollution Control (3).** Air pollution control-devices, principles, efficiencies, costs. Gas scrubbers, electrostatic precipitation, thermal deposition, filters, condensers, afterburners. By-product recovery. Stoichiometry of combustion mixtures and basic industrial plant designs are discussed. Prerequisite: ENV 4101 or ENV 5105.

**ENV 5356 Solid Wastes (3).** In-depth study of the solid waste problem. Topics include municipal, industrial, and agricultural generation of wastes; municipal collection systems; methods of disposal, hazardous wastes, and energetic considerations in the recovery and recycle of wastes.

**ENV 5512 Water and Wastewater Analysis (3).** Relevance of the main quality parameters and their measurements by wet chemistry and analytical equipment. Includes BOD, COD, TOC, CO<sub>2</sub>, TSS, VSS, alkalinity, acidity, pH hardness, ammonia, TKN, NO<sub>2</sub>, NO<sub>3</sub>, PO<sub>4</sub>, etc. Prerequisites: ENV 5666, CHM 1046, and CHM 1046L. Corequisite: ENV 5512L.

**ENV 5512L Water and Wastewater Analysis Laboratory (1).** Experiments are conducted which measure gross organic pollution indicators, suspended solids, conductivity, alkalinity, acidity, pH, nitrate, nitrite, TKN, ammonia, total phosphates, chlorine residual and chlorine breakpoint. Prerequisites: ENV 5666, CHM 1046, and CHM 1046L. Corequisite: ENV 5512.

**ENV 5517 Water and Wastewater Treatment (3).** Wastewater collection systems. Integration of unit operations into the planning and design of treatment plants, including sludge handling and disposal. Prerequisite: Permission of instructor.

**ENV 5659 Regional Planning Engineering (3).** Theories of urban and regional growth; collective utility analysis; input-output models in planning; application of linear programming to regional social accounting; economic base analysis. Prerequisite: Computer Programming or permission of instructor.

**ENV 5666 Water Quality Management (3).** Predicting and evaluating the effect of human activities on streams, lakes, estuaries, and ground waters; and the relation of human activities to water quality and protection of water resources. Prerequisite: Permission of instructor.

**ENV 5905 Independent Study (1-3).** Individual research studies available to academically qualified students on graduate status.

**ENV 5930 Special Topics in Environmental Engineering (1-3).** Specific aspects of environmental technology and urban systems not available through formal course study. Open to academically qualified students only.

**ENV 6045 Environmental Modeling (3).** Evaluation of regional resources, environmental stresses, and considerations in regional systems; systems analysis in environmental management and its relation to decision making; modeling of air and water systems. Prerequisite: Computer programming or permission of the instructor.

**ENV 6510C Advanced Unit Operations I (3).** Theory and design of physical, chemical, and biological unit operations as applied to the advanced treatment of water and wastewater. Prerequisite: ENV 4514 or equivalent.

**ENV 6511C Advanced Unit Operations II (3).** A continuation of ENV 6510 including the re-use of treated

wastewaters and of sludges. Prerequisite: ENV 6510.

**ENV 6511L Advanced Unit Operations Lab (1).** Bench scale experiments for scaling-up and designing the following water and wastewater processes: sedimentation, coagulation, filtration, adsorption, oxidation and gas transfer. Prerequisite: ENV 6510. Corequisite: ENV 6511.

**ENV 6516 Advanced Treatment Systems (3).** Integration of unit operations into advanced treatment systems for waters and wastewater. Prerequisite: ENV 6511.

**ENV 6558 Industrial Wastewater Treatment (3).** Characteristics and composition of industrial wastewaters. Sampling techniques and analyses. Water conservation and re-use. Joint industrial-commercial collection and treatment of wastewaters. Prerequisite: ENV 6516.

**ENV 6615 Environmental Impact Assessment (3).** An examination of alternative techniques useful for analysis and environmental impacts of man's activities. Prerequisite: Permission of instructor and 24 graduate credits.

**ENV 6916 Engineering Project (1-2).** Individual work culminating in a professional practice-oriented report suitable for the requirements of the M.S. degree-project operation. Only three credits are applicable towards degree. Prerequisite: Completion of 20 graduate credits.

**ENV 6935 Graduate Environmental Seminar (1-3).** The course consists of oral presentations made by students, guests, and faculty members on current topics and research activities in environmental and urban systems.

**ENV 6971 Thesis (1-6).** Research for Master's thesis.

**TTE 5015 Applied Statistics in Traffic and Transportation (3).** Civil and Environmental Engineering statistics methods as applied to traffic and transportation are covered. Topics include: significance tests, standard distributions, analysis of variance, and regression analysis. Prerequisite: Graduate standing.

**TTE 5107 Highway Safety Analysis (3).** Accident reconstruction, intersection analysis, highway safety standards, speed estimations from skidding, momentum/energy relationships, human factors. Prerequisites: STA 3033, TTE 4201.

**TTE 5205 Advanced Highway**

**Capacity Analysis (3).** Parameters involved in calculating highway capacity and level of service on different highway and transportation facilities. Computer application will be also discussed. Prerequisite: TTE 4201.

**TTE 5215 Urban Traffic Characteristics (3).**

Speed and volume studies, stream characteristics, traffic flow theory, accident characteristics. Prerequisite: TTE 4201.

**TTE 5506 Urban Mass Transit and Transportation Planning (3).**

Models of urban growth, population forecasts, trip generation, trip distribution, and trip assignment models, model split, system evaluation, transit marketing. Prerequisite: TTE 4201.

**TTE 5526 Airport Planning and Design (3).**

Theory and principles of airport planning and design, include both general aviation and major commercial airports. Design projects required. Prerequisite: TTE 5835 or consent of instructor.

**TTE 5606 Transportation Systems Modeling and Analysis (3).**

Modeling and analysis techniques in transportation. Linear Programming, queueing theory, decision making techniques. Prerequisite: TTE 4201.

**TTE 5805 Advanced Geometric Design of Highways (3).**

Parameters governing the geometric design of highways; curve super-elevation; widening on highway curves; elements of intersection design; design of interchanges; use of AASHTO design guidelines. Design project required. Prerequisite: SUR 4201.

**TTE 5835 Pavement Design (3).**

Analysis and design of sub-base, base, and pavement of a roadway. Discussions of flexible pavement and rigid pavement as structural units. Boussinesq's approach. Westergaard's theory. Beams on Elastic Foundations. Prerequisites: CEG 4011 and CES 4702.

**TTE 5925C Urban Traffic Workshop (3).**

Selected laboratory problems related to urban traffic. Prerequisite: TTE 4201.

**TTE 6257 Traffic Control Systems Design (3).**

Theory and principles of traffic control systems design, including both freeway and urban streets. Design projects required. Prerequisite: TTE 4201.

## Electrical and Computer Engineering

**James Story, Associate Professor and Chairperson**

**Maiek Adjouadi, Assistant Professor**

**Jean Andrian, Associate Professor**

**Tadeusz Babil, Associate Professor**

**Manuel Cereillo, Professor**

**Susan W. Feng, Visiting Assistant Professor**

**Sergio Gonzalez-Arias, M.D., Courtesy Professor**

**Mark Hagmann, Associate Professor**

**Malcolm Helmer, Associate Professor**

**W. Kinzy Jones, Associate Professor**

**Grover Larkins, Assistant Professor**

**Edward Lee, Professor**

**Osama Mohammed, Professor**

**Dong Park, Assistant Professor**

**Gustavo Roig, Associate Professor**

**Laura Ruiz, Instructor and Advisor**

**Pierre Schmidt, Professor**

**Wunna Subbarao, Professor**

**Frank Urban, Associate Professor**

**Carolyne Van Vleet, Professor**

**Kang Yen, Associate Professor**

## Master of Science in Electrical Engineering

The Department of Electrical Engineering offers both thesis and non-thesis options for the Master's Degree. A student seeking the Master's degree with or without thesis is required to pass a comprehensive oral or written examination.

All work counted for the Master's degree must be completed during the five years immediately following the date of admission.

The program provides a broad education, covering more than one field, followed by in-depth studies of areas of interest. Multi-disciplinary programs such as Computer Engineering, Systems Engineering, and Biomedical Engineering are also available.

### Admission Requirements

The following is in addition to the University's graduate admission requirements:

1. A student seeking admission into the program must have a bachelor's degree in engineering, physical sciences, computer science or mathematics from an accredited institution, or, in the case of foreign students, from an institution recognized in its own country as preparing students for further study at the graduate level.

2. An applicant must have achieved a "B" average in upper level under-

graduate work and a combined score of 1000 on the Graduate Record Examination (verbal and quantitative portions).

3. Applicants who have not satisfied the above will be evaluated by the departmental graduate admission committee for probationary or 10% waiver admission.

4. In addition to the above criteria, foreign students whose native language is not English, must take the Test of English as a Foreign Language (TOEFL) and obtain a score of 550 or better.

5. The GPA, GRE and TOEFL scores above are to be considered minimum requirements for admissions. Applicants from science areas other than electrical or computer engineering will be expected to complete sufficient background material at the undergraduate level prior to unconditional acceptance into the graduate program.

### Graduation Requirements

The degree will be conferred when the following conditions have been met:

1. Recommendation of the advisor and faculty of the Department.

2. Certification by the Dean of the School that all requirements of the degree being sought have been completed.

3. A GPA of at least 3.0 has been earned for certain courses required by the program.

4. Met the undergraduate deficiencies, if any existed in the student's graduate program, as additional courses toward the degree.

5. Completed a minimum of 36 semester hours of graduate level credit (not more than six graduate semester hours with a grade of "B" or higher can be transferred from other accredited institutions).

6. Successful defense of an acceptable graduate thesis if required of the program.

7. Students must maintain an overall GPA of 3.0. No grade below "C" will be accepted in a graduate program. In the event that a student is placed on a probationary status, he or she must obtain a directed program from his or her advisor and approved by the Dean prior to continuing further course work toward the degree. The student must satisfy the directed course of action within the prescribed time limit, otherwise he or she will be academically dismissed.

8. Complied with all University policies and regulations.

## Thesis Option

A student shall complete 36 semester credit hours of technical course work including a maximum of six semester credit hours and a minimum of three semester credit hours of EEL 6971 - Master's Thesis.

The Supervisory Committee shall determine the appropriate number of thesis hours a student shall be required to take for the thesis. Thus, 30 or more semester credits of course work are required.

The course requirements include a minimum of 12 hours of 6000-level course credit and a minimum of nine hours at the 5000-6000 level in Electrical Engineering. No more than six hours of Individual Work (EEL 6905) may be counted toward the degree.

Upon the successful completion of all course work, including thesis work, and after the determination by the student's advisor that he or she has completed the objectives of the thesis research, the student must pass a final oral examination which is primarily a defense of the thesis research. The candidate should limit the presentation to 40 minutes, unless told differently by the advisor. The essence of the thesis should be presented in the same manner as that of a technical paper at a conference.

The student must submit the thesis to the examining committee and department chairperson at least ten days prior to the oral examination date. Upon passing the oral examination, and completion of any changes or additions, or both, as required by the committee, each member of the committee will sign a special front page available in the Department. Hardcover bound copies should be submitted to the student's advisor and to the Library. The student should consult with the advisor for approval of all course work prior to registration.

## Non-Thesis Option (By petition only)

A student shall complete 36 semester credit hours of technical course work with a maximum of six semester credit hours of Individual Work (EEL 6905). The course requirements include a minimum of 12 semester credit hours of 6000-level course credit and a minimum of 12 semester credit hours at the 5000-6000 level in Electrical Engineering.

The candidate is required to pass a comprehensive final examination. This examination is given near the end of the candidate's final semester by a

committee composed of three faculty members appointed by the Department. A student who fails the examination may not attempt it again until one semester has elapsed or until additional work prescribed by the examining committee is completed. The student may retake the examination only once. The examination will test the student's general ability in his or her areas of study as determined by the student's supervisory committee.

## Course Requirements

### Common Core

Select three courses with advisor approval

EEL 5482	Fields and Waves Engineering	3
EEL 5500	Digital Communications Systems I	3
EEL 5725	Digital Systems Engineering I	3
EEL 5171	Advanced System Theory	3
EEL 5352	Bipolar Transistors	3
EEL 6261	Power Systems Engineering	3
EEL 6311	Advanced Electronics Systems I	3

Select two courses with advisor approval

EEL 6020	Numerical Analysis of Electrical Devices	3
MAA 4211	Advanced Calculus	3
MAA 4402	Complex Variables	3
MAD 3401	Numerical Analysis	3
MAP 4401	Advanced Differential Equations	3
MAP 5117	Mathematics and Statistics Modeling	3
STA 5446	Probability Theory I	3
STA 5447	Probability Theory II	3
STA 5800	Stochastic Processes for Engineering	3

The above two lists may be changed or expanded by the committee.

Remaining course work will be selected by the student and his advisor based on the student's career objectives.

Any course taken without the proper prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DR" or "DF".

Students who are dismissed from the University due to low grades, may appeal to the Dean for reinstatement. A second dismissal results in no possibility of reinstatement.

## Master of Science in Computer Engineering

The Department of Electrical and Computer Engineering offers both thesis and non-thesis options for the Master's Degree in Computer Engineering. A student pursuing the Master's degree with or without thesis is required to pass a comprehensive oral or written examination and must complete all the required work during the five years immediately following the date of admission to the program.

The program requires that students entering this program have a strong background in math through differential equations, physics with calculus, engineering science, electrical engineering and computer hardware and software. The degree program will provide training in electrical engineering, specializing in computer hardware design as well as in software engineering.

### Admission Requirements

Admission requirements to Computer Engineering are the same as listed under the Electrical Engineering Master's program.

### Graduation Requirements

The degree will be conferred when the following conditions have been met:

1. Recommendation of the advisor and faculty of the Electrical and Computer Engineering Department.
2. Certification by the Dean of the College of Engineering and Design that all requirements of the degree being sought have been completed.
3. An overall GPA of at least 3.0 has been achieved for all graduate course work.
4. The undergraduate deficiencies, if any existed, have been met, as additional courses toward the degree.
5. Completed a minimum of 30 credits in engineering and computer science, plus six credits of thesis. Not more than six graduate semester hours with a grade of "B" or higher can be transferred from other accredited institutions.
6. Completed at least 12 credits of 6000 level and nine credits of 5000 or 6000 level in electrical and computer engineering.
7. Completed the remaining nine credits from computer science or engineering. Six credits maximum of 4000 level may be taken outside the School of Engineering with advisor's approval.
8. All courses and thesis topics must be approved by the student's

thesis advisor in consultation with the student's thesis committee.

9. Completed an acceptable graduate thesis if required of the selected program.

10. Students must maintain an overall GPA of at least 3.0. No grade below "C" will be accepted in any course taken to satisfy the graduate program requirements. In the event that a student is placed on a probationary status, he or she must obtain a directed program of studies from his or her advisor and approved by the Dean prior to continuing further into the degree. The student must satisfy the directed course of action within the prescribed time limit, otherwise he or she will be academically dismissed.

### Thesis Option

A student shall complete 36 semester credit hours of technical course work including a maximum of six semester credit hours and a minimum of three semester credit hours of EEL 6971, Master's Thesis.

The Supervisory Committee shall determine the appropriate number of thesis hours the student shall be required to take for the thesis.

Upon the successful completion of all coursework, including the thesis work, and after the determination by the student's advisor that he or she has completed the objectives set for the thesis research, the student must pass a final oral examination which is primarily a defense of the thesis research.

The student must submit the thesis to the examining committee and department chairperson at least ten days prior to the oral examination date. Upon passing the oral examination, and completion of any changes as required by the committee, each member of the committee will sign a special front page available in the department. Hardcover bound copies of the thesis should be submitted to the student's advisor and to the Library.

### Non-Thesis Option

(By petition only)

A student shall complete 36 semester credit hours of technical coursework, approved by his or her supervisory committee. The candidate is required to pass a comprehensive final examination. This examination is given near the end of the candidate's final semester by a committee composed of three faculty members appointed by the department. A student who fails the examination may not attempt it again until one semester has elapsed or until additional work prescribed by the exam-

ining committee is completed. The student may retake the examination only once. The examination will test the student's general ability in his or her areas of study as determined by the student's supervisory committee.

### Common Core

EEL 5741 Advanced Microcomputers  
EEL 5718 Computer Communication  
Network Engineering

Parallel Computer Design

EEL 6167 VLSI Design

### Electives Engineering

EEL 5725 Digital Systems Engineering I  
EEL 6726 Digital Systems Engineering II  
EEL 6575 Data Communications Engineering  
EEL 6444 Optical Fiber Communications Systems  
EEL 6505 Digital Signal Processing  
EEL 6509 Digital Communications by Satellite  
EEL 6253 Computer Analysis of Power Systems  
EEL 6758 Engineering Design of Microprocessor Based Operating Systems

### Electives Computer Science: (9)

Courses may be selected by student and advisor from 4000, 5000, and 6000 level Computer Science course listings.

The above lists may be changed or expanded by the supervisory committee.

## Doctor of Philosophy in Electrical Engineering

### Admission Requirements

The requirements for admission to the doctoral program in Electrical Engineering are:

1. Applicants having a Master's degree in Electrical Engineering from an accredited institution must satisfy the following requirements for admission to the doctoral program:

- GPA of at least 3.3/4.0 in the master's program
- GRE verbal plus quantitative of at least 1000 points
- Three letters of recommendation in the forms provided by the department
- TOEFL score of at least 550 points for non-English speaking natives.

2. Credentials of all other applicants will be examined by the Graduate Ad-

mission Committee on a case by case basis.

In addition to the departmental requirements, all students must satisfy the University's Graduate Policies and Procedures.

### Identification of Research Area

Within 15 months upon acceptance into the Ph.D. program, the student has to identify an area of research of his or her interest by contacting and being accepted by a professor willing to guide the dissertation research. If no such professor can be found, the student will be dismissed from the Ph.D. program. Contact the Department for a list of the graduate faculty members and their research interests.

### Course and Residency Requirements

#### Course Requirements

At least 90 credit hours beyond the bachelor's degree, including a maximum of 30 credit hours of course work, with a minimum grade of "B" in each course, earned in a Master's degree in Electrical Engineering received at FIU or another accredited institution. The credit hours earned towards the Ph.D. program have the following requirements and restrictions:

- At least 12 credits of Ph.D. Course Breadth Requirements.
- At least 12 credits of course work at 6000 level of major field of interest.
- Registration for Advanced Research is allowed only after successfully having passed the written comprehensive examination.
- Registration for EEL 7980 (Research for Doctoral Dissertation) is allowed only after the student is admitted to candidacy. Twenty-four dissertation hours are required.
- At least 30 credit hours of 5000 or 6000 level electrical engineering courses are required. EEL 5935, 6905, 6912, 6932, 6971, 6977, and 7980 are not considered coursework for the purpose of this 30 credit hours requirement.
- Fifty percent of the hours accumulated have to be at the 6000 and 7000 level (including EEL 7980).

#### Residency Requirements

The Ph.D. student must spend at least one academic year in full-time residency. Usually, this will be after being admitted to Candidacy. To satisfy the residency requirement for a Ph.D.E.E. degree, the candidate must complete a minimum of 18 credit hours within a period of 12 months in residency at the University.

## Graduate Supervisory and Research Committee

The student's Ph.D. Graduate Supervisory and Research Committee should be appointed as soon as possible and not later than 15 months after being admitted to the Ph.D. program. Consult the Graduate Guidelines in the Department for more details on how to select the committee members.

## Ph.D. Course Breadth Requirements

All potential Ph.D. candidates are required to take two two-course sequences for a total of 12 credits outside of their major area and receive a grade of "B" or better in each course. The appropriate areas of study are determined by the dissertation advisor. The student must submit to the Graduate Coordinator the sequences selected when he or she signs up for the written part of the Ph.D.E.E. Comprehensive Examination.

## Written Comprehensive Examination

To be eligible for the written comprehensive examination, the student must have satisfied the Ph.D. course breadth requirements in his or her area of specialization and in two other areas. Those students admitted into the Ph.D. program with an MSEE degree must take this exam before completion of 28 graduate credit hours of course work. Failure to do this is causation for dismissal from the Ph.D. program.

The student must pass all three areas of the examination. Failing one area implies failure of the entire examination. The exam must be retaken the next time it is offered. Failing a second time is causation for dismissal from the Ph.D. program.

Consult the Graduate Guidelines available in the Department for details on examination procedures, dates, duration, application and grading criteria.

## Oral Candidacy Examination:

To take the oral part of the candidacy examination, a student must be in good academic standing at the University, the Research Committee must certify that the student is capable of completing all required course work for the degree by the end of the semester in which the candidacy examination is taken and must have passed the written comprehensive examination.

This exam is usually taken within one year after the satisfactory completion of the written comprehensive examination and consists on the

presentation and defense of the student's written research proposal.

## Admission to Candidacy

Candidacy status indicates that a doctoral student is ready to commence writing the dissertation. A student is admitted to candidacy upon successfully completing all required coursework and passing the candidacy examination.

## Oral Defense and Submission of Doctoral Dissertation

A dissertation is required of all candidates for the doctoral degree. A proposal must be submitted to the student's Research Committee for approval, following the general guidelines in the "Regulations for Thesis and Dissertation Preparation". A student must enroll for dissertation credits in the semester in which he or she expects to be admitted to candidacy, and must maintain continuous enrollment for not less than 3 credits of EEL 7980 every semester, including Summers, until the semester in which the doctoral degree is awarded. Upon completion of the dissertation, the degree candidate will submit to the Dean of Graduate Studies an application for dissertation defense signed by the student's Advisory Committee with sufficient time to allow for publishing a notice in the monthly calendar of dissertation and theses defenses to invite members of the university community to observe the defense.

Following the successful defense of the dissertation, as determined by a majority vote of the student's research committee, the dissertation must be forwarded to the Dean of the College of Engineering and Design and the Dean of Graduate Studies for their approval.

All dissertations submitted in fulfillment of requirements for graduate degrees must conform to University guidelines (see "Regulations for Thesis and Dissertation Preparation"). One final, approved copy of the dissertation must be delivered to the Chairperson of the Department of Electrical & Computer Engineering. Library copies must conform to University guidelines, also published in "Regulations for Thesis and Dissertation Preparation".

## Financial Aid

Consult the Department for information on research and teaching assistantships available for doctoral students.

## Course Descriptions

### Definition of Prefixes

EEL - Engineering; Electrical

**EEL 5015 Electrical Design in Buildings (3).** Review of electrical code and regulations. Design of loads, circuits, surge protectors, security, emergency systems, lighting systems. Special considerations for electrical system in new industrial buildings. Prerequisites: EEL 3112 and EEL 4304.

**EEL 5071 Bioelectrical Models (3).** Engineering models for electrical behavior of nerve and muscle cells, electrode-tissue junctions, volume conduction in tissue and the nervous system as an electrical network. Prerequisite: ELR 4202 or permission of instructor.

**EEL 5085 Biomedical Engineering (3).** Spectrum of radiation sources, types of fields, properties of living tissue, mechanisms of field propagation in tissue. Applications in imaging and therapy, hazards and safety. Prerequisite: EEL 4410 or permission of instructor.

**EEL 5145 Advanced Filter Design (3).** Graduate course in the design and advance analysis of passive and active high order circuits. Use of computer as a design tool. Prerequisite: EEL 4140 or permission of instructor.

**EEL 5171 Advanced Systems Theory (3).** State-space representations for continuous and discrete-time systems, controllability and observability, pole-zero allocation, Lyapunov stability theorem, state observers. Prerequisites: EEL 3657 and graduate level or advanced senior standing or permission of instructor.

**EEL 5270 Electrical Transients in Power Systems (3).** Traveling waves on transmission and multi-conductor systems, successive reflections, distributed parameter systems, transients on integrated power systems. Prerequisite: EEL 4213 or permission of instructor.

**EEL 5275 Power Systems Protection (3).** Analysis of power systems under faulted conditions using linear transformation. The study of surge, transient and waves on power lines. Computer-aided analysis and design emphasizing the protection of equipment. Prerequisite: EEL 4215 or permission of instructor.

**EEL 5348 Digital Electronics (3).** Analysis and design of logic gates using saturated and non saturating ele

ments, transmission gates, interfacing of logic families, bistable circuits, A/D and D/A converters. Prerequisite: EEL 4304.

**EEL 5352 Bipolar Junction Transistors (3).** Bipolar junction transistor physics. Semiconductor bulk properties at equilibrium and nonequilibrium. PN junction theory. Theory of the bipolar junction transistor. Prerequisite: EEL 3396 or permission of instructor.

**EEL 5353 Field Effect Transistors (3).** Field effect device physics and technology. MOS capacitor. DC and AC characteristics of the MOS transistor. The MOS transistor in dynamic operation. Prerequisites: EEL 3396 or permission of instructor.

**EEL 5366 Industrial Electronics (3).** A study of solid state devices for the control of power, their applications and limitations in power switching circuits and in the control of physical transducer. Prerequisites: EEL 4213, EEL 4304 or permission of instructor.

**EEL 5371 High Frequency Amplifiers (3).** Analysis and design of high frequency amplifiers and oscillators; stability, scattering parameters, use of the Smith chart and other practical design tools, noise. Prerequisites: EEL 4304, EEL 4410 or permission of instructor.

**EEL 5437 Microwave Engineering (3).** Microwave guides. Microwave tubes. Microwave solid state devices. Microwave integrated circuits, Microwave enclosures. Prerequisite: EEL 4410 or permission of instructor.

**EEL 5482 Fields and Waves Engineering (3).** Concepts and theorems in fields and waves, analytic techniques for guided waves, radiation and scattering, numerical techniques for analysis of electrical devices using digital computers. Prerequisite: EEL 4410 or permission of instructor.

**EEL 5500 Digital Communication Systems I (3).** This course will consider most important aspects of digital communication systems such as noise related subjects, random signals, linear systems, and baseband digital modulation and multiplexing. Prerequisites: EEL 3135, EEL 3514, EEL 3112 or permission of instructor.

**EEL 5501 Digital Communication Systems II (3).** This course will consider more important aspects of digital communication systems such as matched filters, digital base and modulation, multiplexing, carrier digital modulation and error correction coding.

Prerequisite: EEL 5500 or permission of instructor.

**EEL 5524 Statistical Communication Theory (3).** Noise, random processes, correlation, spectral analysis in the analysis and design of communication systems. Optimization techniques; minimum mean square error. Prerequisite: EEL 3514.

**EEL 5563 Introduction to Optical Fibers (3).** Use of fiber optics as a communication medium. Principles of fiber optics; mode theory; transmitters, modulators, sensors, detectors and demodulators; fiber data links. Prerequisites: EEL 3514, EEL 4314 and EEL 4410 or permission of instructor.

**EEL 5653 Digital Control Systems (3).** Analysis and design of digital control systems. Z-transforms, analysis and control of discrete-time systems, digital control of analog systems. Several digital controller design methods. Computer simulation and microprocessor implementation. Prerequisite: EEL 3657. Corequisite: EEL 4611 or permission of instructor.

**EEL 5718 Computer-Communication Network Engineering (3).** System engineering synthesis, analysis, and evaluation of computer-communication networks. Network design, routing and flow control, telecommunication traffic engineering, transmission, switching, etc. Prerequisite: EEL 5501 or permission of instructor.

**EEL 5719 Digital Filters (3).** Analysis, design and implementation of digital filters. Hardware and software approach to design. Prerequisites: EEL 4709 or permission of instructor.

**EEL 5725 Digital Systems Engineering I (3).** This course involves systematic studies of digital instrumentation, digital control, digital communication systems concepts and case studies. Prerequisites: EEL 4304, EEL 4746 or equivalent or permission of instructor.

**EEL 5741 Advanced Microprocessor Systems (3).** Interfacing of various microprocessors together. Concepts of master-slave systems, virtual memory and I/O control techniques. Digital system evaluation and optimization. Prerequisite: EEL 4746 or permission of instructor.

**EEL 5820 Digital Image Processing (3).** Human vision, digital imaging, image transforms, image enhancement, image restoration, image compression, edge detection, shape analysis, depth information, texture

analysis, and vision systems. Prerequisites: EEL 3135 or CAP 3700 and knowledge of any programming language (FORTRAN, Pascal, C).

**EEL 5935 Advanced Special Topics (1-3).** A course designed to give groups of students an opportunity to pursue special studies in an advanced topic of Electrical Engineering not otherwise offered. Prerequisite: Consent of instructor.

**EEL 6020 Numerical Analysis of Electrical Devices (3).** Numerical techniques for the analysis of static and diffusion eddy current type field problems and associated phenomena in electrical devices. Emphasis on implementation and applications to practical problems. Prerequisites: EEL 4213, MAP 3302 or equivalent or permission of instructor.

**EEL 6075 Biosignal Processing I (3).** Characterizing biosignals by application of time and frequency domain analytic methods. Comparison of analog and digital processing. Engineering design for VLSI implementations in implantable devices. Prerequisites: ELR 4202 and EEL 6505 or permission of instructor.

**EEL 6076 Biosignal Processing II (3).** Engineering design of advanced systems for processing biosignals. Methods for signal compression. Adaptive systems for automatic recognition. Application of artificial intelligence for signal classification. Prerequisite: EEL 6075 or permission of instructor.

**EEL 6078 Therapeutic Medical Electronics (4).** Operating principles and design methods for therapeutic electronic devices including: myoelectric prosthetic devices, cardiac pacers, nerve and muscle stimulators. Includes laboratory. Prerequisite: EEL 5071.

**EEL 6081 Advanced Medical Imaging (3).** Teaches operating principles and design techniques for hardware and software used in CAT and MRI medical imaging systems. Also study other techniques such as PET and nuclear medicine. Prerequisite: EEL 5085.

**EEL 6141 Advanced Network Analysis (3).** Modeling and analysis of networks by t-domain and s-domain techniques. Topics include topology, formulation of loop eqs and node pair eqs., state space networks, computer solutions. Prerequisite: EEL 3112 and FORTRAN or permission of instructor.

**EEL 6167 VLSI Design (3).** Study of VLSI Design concepts in MOS/CMOS environment, CAD techniques, VLSI array processors and wavefront array processors, and Implementation of array processors. Prerequisites: EEL 5741, EEL 4314.

**EEL 6207 Dynamic Analysis of Electrical Machines (3).** State models of rotating machines, derivation of machine model parameters, modeling of machine and power system dynamics. Includes utilization of digital computers to selected practical problems. Prerequisite: EEL 4213 or permission of instructor.

**EEL 6216 Application of Intelligent Systems to Power System Operations (3).** Power system security assessment using intelligence systems techniques such as pattern recognition, expert systems, and neural networks. Class projects include applying IS to load forecasting, alarm processing. Prerequisites: EEL 4214, EEL 6273.

**EEL 6235 Motor Drives Control (3).** Switched, resonant and bidirectional power supplies, DC motors: single, three phase and chopper drives. AC motors: voltage, current and frequency control. Closed loop control. Prerequisites: EEL 4213, EEL 3303, EEL 3657.

**EEL 6253 Computer Analysis of Power Systems (3).** Power systems analysis and designs by computer solutions. Interactive solutions, power flow, optimum solutions. Dynamic solutions and stability. Prerequisite: EEL 4215 or permission of instructor.

**EEL 6254 Power Systems Reliability (3).** Expansion planning, load forecasting, reliability and availability application to generation planning, bulk power supply systems, generation system operation and production costing analysis. Prerequisite: EEL 4215 or permission of instructor.

**EEL 6261 Power Systems Engineering (3).** steady-state analysis, fault studies, load flow, dynamic and transient performance, on-line control, practical applications. Prerequisite: EEL 4215 or permission of instructor.

**EEL 6273 Power System Stability and Control (3).** Direct methods for system stability, computer analysis of large scale models, Lyapunov stability, longer term stability, security analysis, MW-frequency control, isolated and multiple area control. Prerequisites: EEL 4215 and FORTRAN or permission of instructor.

**EEL 6311 Advanced Electronic Systems I (3).** Principles of analog and digital electronics network. Advanced analysis, modeling and computer simulation of op amps. Analog design techniques and practical examples are covered. Prerequisite: EEL 4314 or permission of instructor.

**EEL 6312 Advanced Electronic Systems II (3).** Study of linear properties of electronic systems and design of fault tolerant systems using A/D and D/A and control algorithms. Prerequisite: EEL 6311 or permission of instructor.

**EEL 6315 Advanced Solid State Electronics (3).** IC technologies, properties and fabrication concepts. Bipolar, MOS,  $I^2L$ , CCD, bubble technologies. Ion implantation characteristics. Lithography techniques. Prerequisite: EEL 3396, EEL 4304 or permission of instructor.

**EEL 6332 Thin Film Engineering (3).** Thin films used in microelectronics and optoelectronics; deposition methods; evolution of film microstructure; film growth modeling; introduction to film analysis. Prerequisite: EEL 3396.

**EEL 6382 Solid State Device Physics and Technology I (3).** Field-effect phenomena. Metal oxide silicon capacitor at low, intermediate and high frequency. Interface trap properties from the conductance and capacitance non-uniformities. Prerequisite: EEL 5353.

**EEL 6395 Applied Superconductivity (3).** Covers the basic physical properties of superconductors. Superconducting devices: squids, memory & logic elements. Emphasis is placed on applications of superconductors. Prerequisites: EEL 3396 and EEL 4410. Corequisite: EEL 6315, EEL 6397 or permission of instructor.

**EEL 6397 Semiconductor Device Theory (3).** Device physics and modeling of GaAs FETs. GaAs analog and digital integrated circuits. Modulation doped field effect transistors. Heterojunction bipolar transistor theory. Prerequisite: EEL 3396.

**EEL 6434 Microwave Solid State Devices (3).** Microwave transistors and tunnel diodes, microwave FET, transferred electron devices (TEDS), avalanche transit-time devices, monolithic microwave integrated circuits. Prerequisite: EEL 5437.

**EEL 6443 Electro-Optical Devices and Systems (3).** Introduction to optical devices and systems such as solid state laser systems, their applications

in industry. Also holography, linear and non-linear optical modulation and demodulation concepts. Prerequisites: EEL 4410, EEL 4314. Corequisite: EEL 5563 or permission of instructor.

**EEL 6444 Optical Fiber Communication Systems (3).** Course focuses on specification, design and application of fiber optic communication systems considering the fiber optic wave guide, optical device sources, photo-detector, receiver and transmitter designs. Prerequisite: EEL 5501 or permission of instructor.

**EEL 6463 Antenna Theory and Design (3).** Radiation patterns of dipoles and loops, array analysis and synthesis, self-impedance and mutual impedance, frequency independent antennas and antenna miniaturization, and reflectors and lens antenna. Prerequisite: EEL 4410.

**EEL 6505C Digital Signal Processing (3).** Treatment of digital signal and system characteristics: Z transforms and FFT theory. Real time and correlation functions. Multidimensional signal processing and digital filtering. Prerequisites: EEL 4510, EEL 4314, EEL 5653 or permission of instructor.

**EEL 6509 Digital Communications by Satellite (3).** This course will consider processing and non-processing transponders, earth terminals, propagation link characteristics, multiple access techniques, and spread spectrum techniques. Prerequisite: EEL 5501 or permission of instructor.

**EEL 6575 Data Communications Engineering (3).** Digital networks for data communications, CCITT, HDLC, SDLC. Real time switching techniques. Microprocessor based network topologies. Busing schemes such as VME, MULTIB, RS232. Prerequisites: EEL 4746 and EEL 4314 or permission of instructor.

**EEL 6614 Modern Control Theory I (3).** Graduate level treatment of modern control systems. Optimal control of feedback systems. Performance measures, Pontryagin's minimum principle, dynamic programming, numerical techniques. Prerequisite: EEL 5171 or permission of instructor.

**EEL 6615 Modern Control Theory II (3).** Graduate level course in Stochastic control. Stochastic processes, linear estimation, Kalman filtering techniques in state estimation. Design of feedback control in the presence of noise. Prerequisite: EEL 6614 or permission of instructor.

**EEL 6666 Intelligent Electronic Machine Design (3).** Design of electronic systems with sensors and transducers, to function as an integrated expert system in process control and industry. Computer vision, image processing and robotics. Prerequisites: EEL 4304, EEL 3712 and EEL 4746 or permission of instructor.

**EEL 6673 Identification Theory (3).** System modeling, off-line methods, on-line methods, order and structure determination, diagnostic tests and model validation. Prerequisite: EEL 5171.

**EEL 6726 Digital Systems Engineering II (3).** Analysis and design of time shared digital electronic systems. Artificial intelligence and automation. Robotics and remote control systems. Advanced digital instrumentation and testing. Prerequisite: EEL 5725 or permission of instructor.

**EEL 6758 Engineering Design of Microprocessor Based Operating Systems (3).** Hardware microprocessor based systems, BIOS (basic input and output), Kernel partitions, memory, stack organization and physical design of operating systems. Prerequisites: EEL 4709 and EEL 4746 or permission of instructor.

**EEL 6905 Individual Work (1-4).** Special problems or projects selected by the students and a faculty member. The student conducts the project with a minimum of supervision. Consent of Department Chairperson and Faculty Advisor.

**EEL 6916 Graduate Project (1-3).** Independent research work culminating in a professional practice-oriented report for the requirements of the non-thesis option of the M.S. degree project. Prerequisites: Fifteen graduate credits and approved project plan.

**EEL 6932 Graduate Seminar (1).** An examination of recent technical findings in selected areas of concern. Emphasis is placed on presentations (oral and written), research activities, readings, and active discussions among participants. Prerequisite: Consent of graduate advisor.

**EEL 6971 Research Master's Thesis (1-6).** The student, following the option of the Master's Degree with thesis, should work for his/her thesis through this course. Prerequisite: Graduate standing.

**EEL 6977 Extended Thesis Research (0).** For Graduate research students who have completed their sequence of thesis credits, but must register for a

course to remain on graduate student status.

**EEL 7980 Dissertation (3-12).** Doctoral research leading to Ph.D. Electrical Engineering Dissertation. Prerequisite: Permission of graduate committee.

## Industrial and Systems Engineering

**Fredrick Swift, Professor and Chairperson**

**Hector Carrasco, Assistant Professor**  
**Chin-Sheng Chen, Associate Professor**

**Khoklat Kengskool, Associate Professor**

**Shih-Ming Lee, Associate Professor**

**Menberu Lulu, Associate Professor**

**Sergio Martinez, Lecturer**

**German Nunez, Associate Professor**

**Raymond Racine, Visiting Lecturer**

**Milton Torres, Visiting Lecturer**

## Master of Science in Industrial Engineering

**Sergio Martinez, Coordinator**

The Master of Science program in Industrial Engineering emphasizes research, as well as course work, and the graduate degree is intended to prepare students for the professional practice of Industrial Engineering. The Department offers both thesis and non-thesis options for the Master's Degree. The thesis program entails a minimum of six credits for the successful completion of the research and thesis. The non-thesis option must be supported by the successful completion of a project and a report documenting the engineering effort.

### Admission requirements

The student must meet all University graduate admission requirements. In addition, he or she must also:

1. Have a BS in engineering from an accredited institution or must take prerequisites as required to remedy deficiencies.
2. Must have a "B" average in the last 60 hours of undergraduate work and have a combined score of 1000 on the Graduate Record Examination.
3. Applicants meeting only one of the two requirements in no. 2 will be evaluated by the department admission

sions committee for probationary admissions. Industrial experience and special research will be considered.

4. Foreign students must take the test of English as a foreign language (TOEFL) and obtain a score of 550 or better.

5. Students with a BS in engineering other than Industrial must take one or two additional courses that have been specially developed which cover IE areas of special need.

6. Students with degrees from disciplines other than engineering will be required to take additional courses as needed in math, natural sciences and basic engineering.

### Course requirements

All MSIE degree seeking students must take the following four courses or equivalent as core requirements.

EIN 5322	Engineering Management
EIN 5605	Robotic Assembly Cell
EIN 6248	Advanced Ergonomics
EIN 6936	Design of Industrial Engineering Systems

Students must also take an additional 24 hours as prescribed by their advisor.

### Recommended program: (36)

Four core IE graduate courses	12
Four elective IE graduate courses	12
Two elective graduate courses (other departments)	6
Thesis	6

### Available areas of concentration

Integrated Manufacturing  
Human Factors  
Engineering Management

### Non-Thesis Option

(By petition only)

The candidate is required to pass a comprehensive final examination. The exam will be administered by committee.

### Industrial Engineering Electives

EIN 5115	Survey of Industrial Engineering Basics
EIN 5332	Quality Engineering
EIN 5359	Industrial Financial Decisions
EIN 6117	Advanced Industrial Information Systems
EIN 6249	Occupational Biomechanics
EIN 6319	Advanced Work Design
EIN 6345	Inventory Control Systems
EIN 6357	Advanced Engineering Economy
EIN 6367	Design of Production Systems



EIN 6392	Product Design for Manufacturability and Automation
EIN 6397	Advanced Topics in Manufacturing Automation
EIN 6398	Advanced Manufacturing Process Engineering
EIN 6603	Applied AI/Expert Systems in Industrial Engineering
EIN 6606	Robotic Systems
EIN 6932	Graduate Seminar
EIN 6971	Master's Thesis
ESI 5315	Survey of Operations Research
ESI 6316	Applications of OR in Manufacturing
ESI 6524	Applied Industrial Systems Simulation
ESI 6546	Network Flow Analysis

## Course Description

### Description of Prefixes

EIN-Engineering, Industrial; ESI-Engineering Systems Industrial.

**EIN 5115 Survey of Industrial Engineering Basics (3).** Review of the following topics: Human Factors, Work Design, Automation & Robotics, Engineering Economy, Microprocessor Applications and Production Planning and Control.

**EIN 5322 Engineering Management (3).** Organization of engineering systems including production and service organizations. Inputs of human skills, capital, technology, and managerial activities to produce useful products and services.

**EIN 5332 Quality Engineering (3).** This course examines quality control from an engineering standpoint. It covers ways to meet the challenge of designing high-quality products and processes at low cost.

**EIN 5359 Industrial Financial Decisions (3).** The use of financial techniques and data in planning, controlling and coordinating industrial activities. This course will familiarize the student with accounting concepts and analytical methods. Prerequisite: EIN 3354.

**EIN 5605 Robotic Assembly Cell (3).** Concepts of robot manipulation and sensing, part design for robotic assembly, planning manipulator trajectories, machine vision, robot programming language, cell control, and material transfer.

**EIN 6117 Advanced Industrial Information Systems (3).** Review of the fundamental and theoretical foundation of industrial information systems. Application of the system design process and information system concepts to develop integrated engineering systems.

**EIN 6248 Advance Ergonomics (3).** Analysis of human factors in the design of engineering systems, with emphasis on the interphase of man-machine-media and human limitations in relation to equipment design and work environments. Prerequisites: EIN 4314, EIN 4243, and PCB 3702 or equivalent.

**EIN 6249 Occupational Biomechanics (3).** Study of the theoretical fundamentals for the mechanics of the body. The link system of the body and kinematic aspects of body movement including applications of biomechanics to work systems.

**EIN 6258 Ergonomic Design of Aerospace Systems (3).** Application of ergonomic criteria in design of civil and military aircrafts cockpits and control systems. Ergonomic consideration in design of outer space vehicles, stations, and systems. Prerequisite: EIN 6248.

**EIN 6367 Design of Production Systems (3).** The design of an industrial enterprise including feasibility, plant layout, equipment specifications, auxiliary services, economics and scheduling. Prerequisite: EIN

**EIN 6319 Advanced Work Design (3).** Study of the various human physiologic systems and their responses as it relates to occupational work including endurance, fatigue, recovery, and energy cost of work. Prerequisites: EIN 6248.

**EIN 6345 Inventory Control Systems (3).** Design of non-traditional inventory control systems. Development of several inventory system models. Exploration of methods of collecting appropriate demand and cost data for effective systems analysis. Prerequisite: ESI 3314.

**EIN 6357 Advanced Engineering Economy (3).** Review of engineering economy and the evaluation of advanced manufacturing systems. Evaluation of alternative capital investments considering income taxes, depreciation, inflation, risk and uncertainty. Prerequisite: EIN 3354.

**EIN 6392 Product Design for Manufacturability and Automation (3).** Overview and integration of the design-material-manufacture process.

Design considerations for manufacturability, assembly, and economical production. Concurrent engineering systems. Prerequisite: EIN 4395.

**EIN 6397 Advanced Topics in Manufacturing Automation (3).** Overview of manufacturing systems; evolution of controls and AI; material handling; automation clamps, jigs, and fixtures; cutting sensors; machine vision and autonomous manufacturing. Prerequisites: EIN 6392 and EIN 6398.

**EIN 6398 Advanced Manufacturing Process Engineering (3).** Non-traditional manufacturing processes. Tool selection, jig and fixture design. Material handling. Tolerance and dimensioning. Product assembly. Engineering economics. Manufacturing process planning. Prerequisite: EIN 3390.

**EIN 6603 Applied AI/Expert Systems in Industrial Engineering (3).** Application of artificial intelligence and expert systems as engineering tools. Exploring the use of PCs and symbolic machine with various AI/Expert Systems software. Several projects are required. Prerequisites: CAP 5680.

**EIN 6606 Robotic Systems (3).** Basic robotic system principles, functional requirements of robotic systems, simulation of system preliminary design, and physical experimentation of robotic systems.

**EIN 6932 Graduate Seminar (1).** An examination of recent technical findings in selected areas of concern. Emphasis is placed on presentations (oral and written), research activities, readings and discussions among participants.

**EIN 6936 Design of Industrial Engineering Systems (3).** Overview of systems theories. Systems design process including: Problem definition, analysis, generation of alternatives, systems evaluation, selection of preferred system, and implementation. Prerequisites: EIN 6345, ESI 6316, and ESI 6524.

**EIN 6971 Master's Thesis (1-3).** The students following the thesis option should work on his/her thesis through this course.

**ESI 5315 Survey of Operations Research (3).** Review of the following topics: Linear Programming, Integer Programming, Dynamic Programming, Network, Queuing, Forecasting, Inventory Theory, Simulation and Quality Control.

**ESI 6316 Applications of OR in Manufacturing (3).** Overview of OR techniques. Manufacturing system and product selection. Shop loading, resource allocation, production scheduling, job sequencing, and plant layout problems. System performance evaluation. Prerequisite: EIN 3314.

**EIN 6345 Inventory Control Systems (3).** Design of non-traditional inventory control systems. Development of several inventory system models. Exploration of methods of collecting appropriate demand and cost data for effective systems analysis. Prerequisite: ESI 3314.

**ESI 6524 Applied Industrial Systems Simulation (3).** Advanced simulation techniques with a focus on practical systems modeling using several user-oriented simulation languages. Projects involving design of high-performance simulation programs are required. Prerequisite: ESI 3523.

**ESI 6546 Network Flow Analysis (3).** Deterministic and stochastic network flow analysis; minimal cost flow, shortest route, max-flow, and out-of-kilter algorithms; constrained network analysis; and stochastic queueing networks. Prerequisite: ESI 3314.

## Mechanical Engineering

**M. Ali Ebadian, Professor and Chairperson**

**S. Chellalah, Assistant Professor**

**Genady Cherapanov, Professor**

**Mohammed El-Sayed, Associate Professor**

**Carmen Goldberg, Visiting Coordinator**

**Gordon Hopkins, Professor and Dean**

**Wei Jiang, Visiting Research Associate**

**W. Kinzy Jones, Associate Professor**

**Rene Leonard, Associate Professor**

**Cesar Levy, Associate Professor**

**Weigong Li, Visiting Assistant Professor**

**Norman Munroe, Assistant Professor**

**Jose Orozco, Associate Professor**

**Mordecai Peri, Visiting Professor**

**Ian Radin, Visiting Lecturer**

**Richard Schoephoerster, Visiting Assistant Professor**

**Ebrahim Shiraznadjad, Visiting Assistant Professor**

**Fredrick Swift, Professor and Chairperson, Industrial Engineering**

**Ibrahim Tansel, Assistant Professor**

**Kuang-Hsi Wu, Associate Professor**

**Gao Yang, Visiting Assistant Professor**

**Tachung Yih, Assistant Professor**

## Master of Science in Mechanical Engineering

**Kuang-Hsi Wu, Graduate Studies Coordinator**

### Admission Requirements

Bachelor's degree in Engineering or related field from an accredited institution with a minimum 3.0 GPA (on a scale of 4.0 maximum) in the upper level work and a combined (verbal and quantitative) score of 1000 on the Graduate Record Examination (GRE). Applicants having either a 3.0 GPA or a score of 1000 on the GRE will be evaluated by the department committee for possible admission. Under certain circumstances, consistent with state university requirements, students may be admitted under 10% exception rule, if they do not have a 3.0 GPA nor a score of 1000 on the GRE. Therefore, minority students are encouraged to apply for proper program admission. A student whose degree is not in Mechanical Engineering may need additional remedial coursework. Foreign students require a minimum of 500 on the TOEFL.

### Areas of Specialization

Air Conditioning and Refrigeration  
Bioengineering/Biomechanics

Computer Aided Design  
Energy Systems  
Finite Element Analysis  
Fluid Mechanics  
Fracture Mechanics  
Heat Transfer  
Electronic Packaging  
Material Science

### Course Requirements

All MSME degree seeking students must take the following three courses or equivalent as common core courses:

EGM 5315 Intermediate Analysis of Mechanical Systems 3  
and a course in Computational Engineering Analysis 2

Select one of the following two courses with advisor approval:

EGM 5354 Finite Element Method Application in Mechanical Engineering 3  
EGM 6422 Advanced Analysis of Mechanical Systems 3

EML 6935 Graduate Seminar 1

An additional 21 credit hours are to be taken from the following Mechanical Engineering courses (up to a maximum of six semester hours may be taken from courses offered by other departments).

EGM 5615 Synthesis of Engineering Mechanics 3

EGM 6570 Fracture Mechanics 3

EGM 6586 Fluid Mechanic Applications in Physiological Systems 3

EGM 6587 Applied Biomedical and Diagnostic Measurements 3

EGM 6588 Solid Mechanics Applications in Physiological Systems 3

EMA 5295 Principles of Composite Materials 3

EMA 5507C Analytical Techniques of Material Sciences

EMA 5935 Advanced Topics in Material Engineering 3

EMA 6127C Advanced Physical and Mechanical Metallurgy 3

EMA 6165C Polymer Physics and Analytical Techniques 3

EML 5103 Intermediate Thermodynamics 3

EML 5104 Classical Thermodynamics 3

EML 5125 Classical Dynamics 3

EML 5152 Intermediate Heat Transfer 3

EML 5385 Identification Techniques of Mechanical Systems 3

EML 5530 Intermediate CAD/CAE 3

EML 5562	Advanced Electronic Packaging	3
EML 5606C	Advanced Refrigeration and Air Conditioning Systems	3
EML 5615C	Computer Aided Design in Air Conditioning Systems	3
EML 5708	Advanced Design of Thermal and Fluid Systems	3
EML 5709	Intermediate Fluid Mechanics	3
EML 6153C	Advanced Heat Transfer	3
EML 6154	Conduction Heat Transfer	3
EML 6155	Convection Heat Transfer	3
EML 6157	Advanced Radiation Heat Transfer	3
EML 6223	Advanced Mechanical Vibrations Analysis	3
EML 6233	Fatigue and Failure Analysis	3
EML 6532	Advanced CAD/CAE	3
EML 6712C	Advanced Fluid Mechanics	3
EML 6714	Advanced Gas Dynamics	3
EML 6725	Computational Fluid Dynamics	3
EML 6805	Advanced Design of Robots	3
EML 6908	Independent Studies	3

### Thesis Requirement

Six semester hours (three credits maximum per semester) must be earned and an acceptable thesis must be completed. Upon the approval of the departmental committee, the thesis requirement may be replaced by two additional courses. Usually, this permission is granted to the student with considerable research and development related work experience.

### Other Requirements:

1. Earn a minimum of 3.0 GPA average in all approved courses in the student's program of study.
2. Attend one semester of the ME Graduate Seminar prior to graduation and give at least one presentation in the seminar.
3. Pass a comprehensive examination (given by the departmental committee) which may include an oral defense of the thesis project. Students with non-thesis option must also pass this comprehensive examination.

## Course Descriptions

### Definition of Prefixes

EGM - Engineering Mechanics; EGN - Engineering; General; EMA - Engineering; Materials; EML - Engineering; Mechanical

**EGM 5315 Intermediate Analysis of Mechanical Systems (3).** First course at the graduate level in the analysis of mechanical systems. Modeling of the system and analytical and numerical methods of solution of the governing equations will be studied. Fluid and thermodynamic systems will be emphasized in this course. Prerequisite: EGM 3311 or permission of instructor.

**EGM 5354 Finite Element Method Application in Mechanical Engineering (3).** Utilize the finite element method to solve problems in heat transfer, fluid dynamics, diffusion, acoustics, vibration, and electromagnetism, as well as the coupled interaction of these phenomena. Prerequisites: CGS 3420, EGM 3520, and EML 4140.

**EGM 5615 Synthesis of Engineering Mechanics (3).** Unified approach to the analysis of continuous media using constitutive equations, mechanical behavior of materials and their usefulness in handling failure theories and composite materials. Prerequisites: MAP 3302 and EGM 3520.

**EGM 5935 Review of Topics In Mechanical Engineering (4).** To prepare qualified candidates to take Mechanical Engineering PE written examination. Reviewed courses include Thermodynamics, Fluid Mechanics, Mechanics of Materials, Mechanical Design and Heat Transfer.

**EGM 6422 Advanced Analysis of Mechanical Systems (3).** Modeling of vibrational and dynamic systems including solution of governing equations by analytical and numerical techniques. Prerequisite: EGM 5315 or permission of instructor.

**EGM 6570 Fracture Mechanics (3).** Failure criteria and the different modes of fracture; stress intensity factor; the J Integral; viscous and plastic fracture mechanics and crack displacement models will be studied. Prerequisite: EGM 5615.

**EGM 6586 Fluid Mechanics Application in Physiological Systems (3).** Fluid mechanics principles including finite element and finite difference methods as it is applied to the analysis of various physiological systems will be covered. Process flow, diffusion and

transport will be discussed in cardiovascular and pulmonary systems. Application of these primarily in the design of heart-lung machine, dialysis units and heart valves will be discussed. Prerequisite: EGM 4580 or permission of instructor.

**EGM 6587 Applied Biomedical and Diagnostic Measurements (3).** Fundamentals of Hemodynamic measurements and various imaging modalities will be covered. The students will be spending some time in clinical laboratories in making actual measurements. The course will be taught in collaboration with the Diagnostic Radiology Department at Mt. Sinai Medical Center, and Baptist Hospital. Prerequisite: EGM 4580 or permission of instructor.

**EGM 6588 Solid Mechanics Application in Physiological Systems (3).** Solid mechanics and numerical methods as applied to rheology analysis of musculoskeletal system and trauma. Design application in orthotics and prosthesis and heart valve. Prerequisite: EGM 4580 or permission of instructor.

**EGN 5990 Fundamentals of Engineering (FE) Review (4).** Prepares upper level engineering students to take the fundamentals of Engineering (FE) State Board Examinations. Reviews Chemistry, Computers, Statics, Dynamics, Electrical Circuits, Fluid Mechanics, Mechanics of Materials, Material Science and Thermodynamics.

**EMA 5295 Principles of Composite Materials (3).** The mechanical behavior of composite materials used in the automotive, aircraft and sporting goods industries. material and laminar properties; design of composites; failure analysis; and environmental effects. Prerequisite: EGM 5615 or permission of instructor.

**EMA 5507C Analytical Techniques of Materials Sciences (3).** Fundamental theories and techniques of the analytical methods for materials including: X-ray diffraction, scanning and transmission electron microscopy, thermal and surface analysis, and vacuum systems. Prerequisite: EGN 3365.

**EMA 5935 Advanced Topics In Materials Engineering (3).** Topics include thermodynamics of solids, principles of physical metallurgy, including phase transformation and diffusion and analytical methods in materials engineering. Prerequisite: EGN 3365.

**EML 6127C Advanced Physical and Mechanical Metallurgy (3).** Advanced topics in physical and mechanical metallurgy including statics and dynamics of dislocations, plastic deformation of fracture, creep solidification, phase transformation, and heat treatment. Prerequisite: EGN 3365 or permission of instructor.

**EML 6155C Polymer Physics and Analytical Techniques (3).** Topics in polymers and the analytical techniques, including: synthesis, characterization, state of polymers, plasma processes, X-ray diffraction, scanning and transmission electron microscopy. Prerequisite: EGN 3365 or permission of instructor.

**EML 5103 Intermediate Thermodynamics (3).** Thermodynamic approach to processes and engines; alternative formulations and legendre transformations; maxwell relations, first and second order phase transitions. Prerequisites: EML 4101 and EGM 3311.

**EML 5104 Classical Thermodynamics (3).** Mathematical analysis of the laws of classical reversible and irreversible thermodynamics. Applications to mechanical, electromagnetic, and chemical systems, under ideal and real current interest. Prerequisite: EML 3101.

**EML 5125 Classical Dynamics (3).** Kinematics of rigid body motion, Eulerian angles, lagrangian equations of motion, inertia tensor, momental ellipsoid. Rigid-body equations of motion, Euler's equations, force-free motion, polhode and herpolhode, theory of tops and gyroscopes. Variational principles. Hamiltonian equations of motion. Poincaré representation. Prerequisites: MAP 3302 and EGN 3321.

**EML 5152 Intermediate Heat Transfer (3).** Multi-dimensional heat conduction under steady and transient conditions. Heat, mass and momentum transfer. Radiation heat transfer. Gas radiation. Free and forced convection. Prerequisites: EML 4140 and EML 5709.

**EML 5385 Identification Techniques of Mechanical Systems (3).** FFT, time series analysis and neural networks are introduced. Applications of these techniques are discussed for identification of mechanical structures, and machine diagnostics. Prerequisite: EML 4312.

**EML 5530 Intermediate CAD/CAE (3).** Computer aided geometrical modeling

of spatial mechanical systems. Design criteria and analytical approaches for planar kinematic systems will be emphasized. Prerequisites: EML 4535, or permission of instructor.

**EML 5562 Advanced Electronic Packaging (3).** Advanced topics in electronic packaging. Evaluation of first through fourth level assembly. Applications of computer layout design, thermal management and mechanical stability analysis. Prerequisite: EML 4561 or permission of instructor.

**EML 5606C Advanced Refrigeration and Air Conditioning Systems (3).** The various methods used in the thermal design and analysis of both refrigeration and heat pump systems are investigated. Various methods of producing heating and cooling are examined including vapor compression, absorption, air cycle, steam jet, thermoelectric, solar heating and cooling systems.

**EML 5615C Computer Aided Design in Air Conditioning (3).** Software will be used to demonstrate heating, ventilating and air conditioning design concepts and sizing equipment and determining performance parameters. Project design is required. Prerequisite: EML 4601, EML 4603.

**EML 5708 Advanced Design of Thermal and Fluid System (3).** Advanced designs of pumps, compressors, heat exchangers, HVAC systems and thermal and fluid control devices. Prerequisite: EML 4706.

**EML 5709 Intermediate Fluid Mechanics (3).** Basic concepts and scope of fluid dynamics; non-inertial reference frames. Two-dimensional potential theory. Applications to airfoils. The Navier-Stokes equations; selected exact and approximate equations. Prerequisite: CWR 3201.

**EML 6153C Advanced Heat Transfer (3).** Review of analogies among heat, mass and momentum transfer. Free and forced convection from theoretical and experimental viewpoint for laminar and turbulent flows. Film and dropwise condensation. Prerequisite: EML 5152.

**EML 6154 Conduction Heat Transfer (3).** Heat transfer by conduction for steady and unsteady One and Multi-dimensional systems with and without heat generation. Temperature distribution analysis using analytical and computational methods. Prerequisite: EML 4140.

**EML 6155 Convection Heat Transfer (3).** Development and solution of

governing equations of parallel flows, boundary layer flows, instability and turbulence with convection heat transfer. Prerequisite: EML 4140.

**EML 6157 Advanced Radiation Heat Transfer (3).** Introduce the graduate student to heat transfer by radiation for steady and unsteady one and multi-dimensional systems. Radiation parameters affecting different systems will be studied, analytically or numerically. Prerequisite: EML 4140.

**EML 6223 Advanced Mechanical Vibration Analysis (3).** Multidegree of freedom systems, discrete and continuous systems; vibration control and introduction to vibration of non-linear systems. Prerequisite: EML 4220.

**EML 6233 Fatigue and Failure Analysis (3).** A study of the theoretical and practical aspects of material failure including failure modes, life prediction, corrosion with the goal of designing a safe product. Prerequisite: EGM 5615.

**EML 6532 Advanced Computer Aided Design/Computer Aided Engineering (3).** Advanced CAD techniques in design of mechanical systems. Architecture of CAD systems including database applications. Advanced computational geometry student programming. Prerequisites: EML 5530.

**EML 6712C Advanced Fluid Mechanics I (3).** Turbulent flows with emphasis on engineering methods. Momentum, energy, and species transfer. Production, dissipation, and scaling laws for turbulence. Mixing length, effective viscosity. Prerequisite: EML 5709.

**EML 6714 Advanced Gas Dynamics (3).** Thermodynamic and fluid mechanics principles to high speed flows. Flows to be studied include flows with friction and heat loss/addition. Prerequisite: EML 4711.

**EML 6725 Computational Fluid Dynamics (3).** Basic computational methods for incompressible and compressible flows. Methods for solving the stream function equation. Boundary conditions for vorticity and stream function equations. Finite difference and finite element techniques. Prerequisites: CGS 3420, EML 6712.

**EML 6805 Advanced Design of Robots (3).** Kinematic analysis of mechanisms and robot arms, geometric configurations, analytical and numerical methods in kinematics. Prerequisite: EML 3222, EML 3262, EML 4501.

**EML 6908 Independent Studies (1-3).** Individual research studies available for qualified graduate students. The work is to be performed under the supervision of an advisor. A report is to be submitted. Students may register for 1 to 3 credits per semester. Prerequisite: Advisor's permission.

**EML 6935 Graduate Seminar (1).** Different problems in Mechanical Engineering and results of ongoing research will be presented and discussed by invited experts. The seminar will expose the students to advances in existing and emerging areas of research. Prerequisite: Graduate standing.

**EML 6971 Masters Thesis (1-6).** Masters thesis in any advanced topic, a report is to be submitted and an oral presentation is to be made. Students may register for one to three credits per semester. Total of six credits to be earned. Prerequisite: Advisor's permission.

## School of Design

**Iraj Majzub, Director and Professor**  
**Leonardo Alvarez, Associate Professor and Coordinator**  
**Juan A. Bueno, Assistant Professor**  
**Milady Lenart, Visiting Lecturer**  
**Anna Maria Pages, Visiting Lecturer**

### Master of Landscape Architecture

The graduate program in Landscape Architecture is designed to prepare graduates for professional practice as well as advance the knowledge base of the field through research. By applying their understanding of the natural and cultural environments, landscape architects plan and design projects which range from gardens to regional space systems to national parks. Whether for public or private use, the landscape architect is concerned with the quality of relationships between people and their environment.

The Department offers two options in the Landscape Architecture graduate program. The Professional Degree Option is intended for individuals with an undergraduate degree in a major other than a design discipline, or with a preprofessional undergraduate degree in a design discipline. The Post-professional Degree Option is intended for individuals with an undergraduate degree in landscape architecture who wish to pursue advanced professional study.

### Professional Degree Option

Individuals with a Bachelor of Arts or a Bachelor of Science, or equivalent, from an accredited institution are eligible for admission to the program. Three years of full-time study in residence and three months of full-time professional internship are normally required. However, a part-time study option is available subject to the review of the Department. Satisfactory completion of 90 credits in the following course of study is required.

Landscape Architectural Design	36
Design Implementation	21
History and Theory	12
Professional Practice Studies	6
Research Specialization	15

Individuals with an undergraduate degree in architecture from an accredited professional program, or with a pre-professional undergraduate degree in architecture, landscape architecture, or environmental design may be granted advanced standing, not to exceed 30 credits for undergraduate courses with a grade of 3.0 or better on a 4.0 point scale.

### Post-Professional Degree Option

Individuals with an undergraduate degree in landscape architecture from an accredited professional program are eligible for admission to the program. Two years of full-time study in residence are normally required. However, a part-time study option is available subject to the review of the Department. Satisfactory completion of 60 credits in the following course of study is required.

Landscape Architectural Design	24
Elective Courses	36

### Scholarships and Awards

The following scholarships and awards are presented to students fully admitted to the graduate program in Landscape Architecture who have demonstrated outstanding achievements in their studies.

**The Adele E. Smith Outstanding Student Award.** Each year, upon nomination by the Program faculty, the School of Design gives this award to the outstanding graduating student.

**American Society of Landscape Architects Awards.** On nomination by the Program faculty, the American Society of Landscape Architects awards a Certificate of Honor and a Certificate of Merit to the two students who have demonstrated a high degree of academic scholarship and of accomplishments in skills related to the art and technology of landscape architecture.

**Department of Landscape Architecture and Architectural Studies Awards.** These awards are annually presented by the Department, upon the recommendation of the Program faculty, to the students who have demonstrated outstanding achievement in scholarship, research, and design.

**The Ernest and Virginia Makemson Memorial Endowed Scholarship Fund.** This fund provides support for students who have demonstrated interest and experience in restoring and/or preserving Florida's natural and cultural environment through the practice of landscape architecture and design.

### Ownership of Student Work

Student work, submitted to the Department in satisfaction of course or degree requirements, becomes the physical property of the Department. However, students retain all rights to the intellectual property of such work. This work may include papers, drawings, models, and other materials. The Department assumes no responsibility for safeguarding such materials. At its discretion, the department may retain, return, or discard such materials. The Department will not normally discard the materials of currently enrolled students without giving the student a chance to reclaim them.

## Course Descriptions

### Definition of Prefixes

ARC-Architecture; IND-Interior Design; LAA-Landscape Architecture

**ARC 5176C Computer Practices in Design II (3).** Advanced study in concepts, issues and methods in computer-aided architectural design. Application of ARC 5175. Prerequisite: ARC 5175 or equivalent.

**ARC 5916 Innovations in Building Technology (3).** Experimental approach to new materials and methods applicable to the field of construction. Prerequisite: Permission of instructor.

**LAA 5235 Theory of Landscape Architecture (3).** Critical review of the environmental parameters, morphological concepts and ideological principles that generate form and meaning in landscape architecture. Prerequisite: Departmental approval.

**LAA 5335 Site Development (3).** Issues, controls, and methods pertinent to the physiographic, topographical, and cultural determinants of site development. Prerequisite: LAA 5652 or equivalent.

**LAA 5371 Computer Practices In Design I (3).** Introduction to computer applications and to computer utilization in Landscape Architecture. Explore both the potentials and limitations of computer usage in the profession. Prerequisites: COC 3300 or equivalent and departmental approval.

**LAA 5424 Landscape Construction I (3).** Study of materials and methods used in landscape construction. Introduction to manipulation and calculation of site work. Prerequisite: LAA 5335.

**LAA 5425 Landscape Construction II (3).** Production of complete set of landscape construction documents, including drawings and project manual with bidding documents, contract documents and technical specifications. Prerequisite: LAA 5424.

**LAA 5521 Tropical Landscape Systems I (3).** Overview of natural and cultural aspects pertinent to the planning, design and management of Florida's tropical and subtropical landscapes.

**LAA 5652 Interdisciplinary Design Studio I (6).** Introduction to two- and three-dimensional representational techniques. Fundamental geometric constructions, spatial theory, three-dimensional perception and color theory. Programmed designs are executed. Prerequisite: Departmental approval.

**LAA 5653 Landscape Architectural Design I (6).** Introduction to the design process and sources of form in landscape architecture. Projects focus on spatial composition and the use of landscape materials in the solution of design problems. Prerequisite: LAA 5652.

**LAA 5715 Architectural History and Theory (3).** An overview of architectural history, from the beginnings of western architecture and urban design to the 20th century, including current trends. Departmental approval.

**LAA 5716 History of Landscape Architecture (3).** Historical survey of the principal sites and traditions manifested in the evolution of landscape architecture and urban design from antiquity to the present. Prerequisite: Departmental approval.

**LAA 6215 Landscape Architectural Practice (3).** Topics to be covered include economic viability, organizational structure, intra-office relationships, management systems, task definition, and computer applications. Prerequisite: LAA 5371.

**LAA 6222 Landscape Architecture Communication (3).** This course develops methods and techniques for the effective communication of landscape planning and design values to the consumer. Prerequisite: Departmental approval.

**LAA 6245 Theory of Urban Design (3).** Critical review of the principal theories of urbanism that have influenced the fabric and image of the city in Western history. Prerequisite: LAA 5235 and LAA 5716.

**LAA 6246 Typology of Landscape Architecture (3).** Critical examination of the origin, development and transformation of form and meaning in modern and post modern landscape architecture and urban design. Prerequisite: LAA 5235 and LAA 5716.

**LAA 6342 Landscape Aesthetics (3).** This course explores values of natural, rural, industrial and urban landscapes. Emphasis is on aesthetic perception and the relationship to the design process. Prerequisites: LAA 5235 and LAA 5716.

**LAA 6382 Methods of Environmental Analysis (3).** Primarily through case studies, this course will explore the methods available to the landscape architect for analyzing land resource data and applying the results to land management and environmental design. Prerequisites: LAA 5521.

**LAA 6541 Tropical Landscape Systems II (3).** Study of the natural and cultural aspects pertinent to the planning, design and management of the world's tropical and subtropical landscapes.

**LAA 6551 Tropical Landscape Systems III (3).** Application of the natural and cultural aspects pertinent to the planning, design, and management of sustainable tropical and subtropical landscapes. Prerequisites: LAA 5521 and LAA 6541.

**LAA 6654 Landscape Architectural Design II (6).** Planning and design studio on the issues of recreational land use at a range of project scales. Emphasis on environmentally significant sites in tropical and subtropical landscapes.

**LAA 6655 Landscape Architectural Design III (6).** Planning and design studio on the issues of residential land use at a range of project scales. Emphasis on culturally significant sites in tropical and subtropical landscapes.

**LAA 6745 Preservation of Landscape Architecture (3).** Critical

examination of the formation and preservation of historic sites with emphasis on Interpretation, analysis and evaluation of cultural landscapes and urban places. Prerequisite: LAA 5235 and LAA 5716.

**LAA 6835 Interdisciplinary Design Studio 2 (6).** Work on selected projects with graduate students in architecture, urban and regional planning and/or building construction. Landscape architecture faculty involvement. Prerequisite: LAA 6655.

**LAA 6905 Independent Study (1-3).** Individual studies under supervision of faculty, tutor, or advisor. Consent of tutor and faculty chairperson required. Prerequisite: Departmental approval.

**LAA 6915 Supervised Research (1-5).** Each student must engage in supervised work under a principal investigator on either a proposal for funding or a funded project. Assigned duties must be agreed to by student and principal investigator prior to beginning the supervised work. Prerequisite: Department approval.

**LAA 6916 Research Methods In Landscape Architecture (3).** Advanced research methodology for landscape architecture students. Focus will be on data acquisition, interpretation and presentation formats. Prerequisite: LAA 5371 and Departmental approval.

**LAA 6935 Graduate Seminars (1-3).** Typical seminar designed especially for direction by visiting professionals or visiting faculty from other disciplines. Prerequisite: Departmental approval.

**LAA 6936 Special Topics (1-3).** Course to address current special topics of interest. It may be developed in cooperation with a private or public sector office, industry, or environmental association.

**LAA 6971 Terminal Project/Thesis (6).** Individual or group terminal project may be approved in lieu of a thesis where the research does not suit the conventional thesis format. Prerequisites: LAA 6655 and departmental approval.

## Construction Management

**Jose D. Mitrani, P.E., Associate Professor and Chairperson**

**Irtishad Ahmad, Assistant Professor**

**Gabriel Auriolles, Associate Professor**

**Wilson C. Barnes, A.I.A., Assistant Professor and Coordinator, Broward Program**

**Bhaskar Chaudhari, P.E., Professor**

**Eugene D. Farmer, A.I.A., Assistant Professor**

**Ayman Morad, Assistant Professor**

**Julio Otazo, Assistant Professor**

### Master of Science in Construction Management

The masters degree is rapidly becoming the entry level requirement for middle and upper level managerial positions in the construction industry. The primary goal of this program is to provide the knowledge and advanced skills essential for success in these positions. The program is flexible enough to accommodate graduates from other disciplines who may lack a part of the undergraduate background in construction management.

Students who hold four year undergraduate degrees in construction management or its equivalent in related fields may normally complete the masters degree in one academic year as full-time students. Equivalent in related fields should include studies in construction drawings, construction materials and methods, construction accounting and finance, economic planning, structures, sitework, legal aspects of construction, cost estimating, construction scheduling and business management/finance. Students with deficiencies in these fields may need longer residence for the masters degree, as they will be required to take specified basic courses to provide a foundation for advanced courses.

#### Admission Application

Each student wishing to enter the graduate program must formally apply to the University for acceptance. See catalog for graduate application instructions.

#### Admission Requirements

In order to be admitted, applicants should hold a Bachelor's Degree in Construction, Construction Management, Architecture, Engineering, Business or equivalent related fields. In addition, applicants must meet one of the two following criteria:

1. Must have earned a minimum grade point average (GPA.) of 3.0 in the last 60 credit hours of coursework related to their undergraduate degree, as computed by the Office of Admissions, or,

2. Must have obtained a score of at least 1000 on the Graduate Record Examination (GRE) or a minimum score of 500 on the Graduate Management Admissions Test (GMAT), and have earned a minimum grade point average of 2.0 in the last 60 credit hours of coursework related to their undergraduate degree, as computed by the Office of Admissions.

#### GRE or GMAT

All graduate students, regardless of undergraduate GPA., are required by the University to take the GRE or the GMAT. Students that did not take the GRE or the GMAT for admission into the program must take either one no later than the beginning of the second semester into their masters work.

#### TOEFL

In addition to the above criteria foreign students must take the TOEFL (Test of English as a Foreign Language) exam and obtain a score of 500 or better.

#### Background

Applicants should hold a Bachelor's degree in Construction, Construction Management, Architecture, Engineering, Business or "equivalent related fields." Transcripts of all applicants will be reviewed to ascertain successful completion of program prerequisites.

"Equivalent in related fields" should include studies in construction drawings, construction materials and methods, construction accounting and finance, economic planning, structures, sitework, legal aspects of construction, cost estimating, construction scheduling and business management/finance. Students with deficiencies in these fields may need longer residence for the masters degree, as they will be required to take specified basic courses to provide a foundation for advanced courses.

#### Curriculum

Students seeking to obtain a Master of Science Degree in Construction Management have a choice of either a thesis or a nonthesis option. The 36 semester hour thesis option consists of a minimum of 30 semester hours of coursework and up to six semester hours of thesis. The non-thesis option consists of 39 semester hours of coursework and may include up to six semester hours of independent studies.

A student shall not register for masters thesis without first having received the approval from his/her advisor, his/her supervisory committee, and the Chairperson of the Department. A student may not register for independent studies without first having received the approval of his/her advisor, the Department Graduate Committee, and the Chairperson of the Department.

#### Course Requirements

Graduate credit is awarded for courses numbered 5000 and above. The work in the major field must be in courses numbered 5000 or above. For work outside the major, courses numbered 3000 or above may be taken provided they are part of a plan of study approved by the student's supervisory committee of the Department Graduate Committee, whichever is applicable. Approval must be obtained in writing prior to the student registering for such a course.

Students with deficiencies in the areas designated as equivalent related fields will be required to take 3000 and 4000 level courses in Construction Management prior to registering for any graduate level courses in order to provide the proper foundation for advanced courses. Students required to take these pre-requisite courses are advised to register them for the "P" or "F" (Pass or Fail) grade option and shall take them until they complete them with a grade of "P." (For graduate students taking undergraduate pre-requisite courses a "P" grade shall be considered to be equivalent to a minimum grade of "C" or better. All grades other than "P" or "F" grades (regardless of course level) will be counted when calculating the student's graduate grade point average.

The program of coursework for a masters degree must be approved by the student's advisor, supervisory committee (if thesis option), and Department Chairperson. No more than six credits from a previous masters degree program may be applied toward a second masters degree. These credits are applied only with the written approval of the Department Chairperson and the Dean of the College of Engineering and Design.

#### Transfer of Credit

Only graduate (5000 - 7999) level work to the extent of two courses, totaling six semester hours, earned with a grade of 'A', 'B+', or 'B' may be transferred from another institution approved by the Department Chairperson and the Dean of the College of Engineering and Design, or from post baccalaureate work

at the University. Credits transferred from other universities will be applied toward meeting the degree requirements but the grades earned will not be computed in the student's grade point average. Acceptance of transfer of credit requires approval of the student's advisor, supervisory committee (if thesis option) and the Department Chairperson. Petitions for transfer of credit for a masters degree must be made during the student's first term of enrollment in the masters program. Nonresident or extension work taken at another institution may not be transferred to Florida International University for graduate credit. No courses taken by correspondence or as part of another degree may be used toward a graduate degree.

### **Supervisory Committee**

Students that choose the thesis option should appoint a supervisory committee as soon as possible after admission into the program, but in no case later than the second semester of graduate study. Supervisory committees for graduate degree programs are nominated by the student's selected graduate advisor and approved by the Department Chairperson. The student's proposed plan of study must be approved, in writing, by the student's graduate advisor, the supervisory committee and the Department Chairperson.

### **Masters Thesis**

A student choosing the thesis option must, as part of his/her plan of study, prepare a written proposal of the thesis work planned for presentation to his/her graduate advisor, supervisory committee, and the Department Chairperson. This proposal must adhere to all University and Department regulations concerning format and content. Once this proposal is approved, in writing, by the student's graduate advisor, his/her supervisory committee, and the Department Chairperson, the student will be permitted to register for masters thesis.

### **Examination**

A final comprehensive examination must be passed by both thesis and non-thesis masters candidates. This examination will be administered on campus and will cover at least the candidate's field of concentration and may include any other topics of general construction knowledge. The Department will contact the student to coordinate the scheduling of this examination during the student's final semester at the university. For a candidate who elected the thesis option, the examination shall be administered by his/her supervisory

committee. For a candidate who elected the non-thesis option, the examination shall be administered by an examination committee comprised of three department faculty appointed by the Department Chairperson.

### **Time Limitation**

All work, including transferred credit, counted toward the masters degree must be completed during the seven years immediately preceding the date on which the degree is awarded.

### **General Regulations**

#### **Normal Loads**

Students taking a minimum of 9 semester credit hours per semester are considered full time students at the graduate level. Students taking under 9 hours are considered part time and should be aware that certain university privileges and benefits may not be applicable to part time students. Students are not recommended to take excessive loads. Special exceptions may be made, at the option of the Department, in the case of students with a grade point average of 3.5 or greater. Students that meet this criteria wishing to take over 15 semester credit hours must have the approval of both the Chairperson of the Department and the Dean of the College of Engineering and Design, prior to registering for an overload.

#### **Grades**

The Department of Construction Management requires a minimum grade point average of 3.0 in all 5000 and 6000 level courses taken towards a masters degree. No more than 6 credits of 5000 or 6000 level courses with an earned grade less than a "B" will be accepted. The minimum acceptable grade for any work attempted as a graduate student is a "C." Students required to take 3000 and 4000 level prerequisite courses shall take them until they complete them with a grade of "P" or better (or "C" or better). All grades other than "P" or "F" grades (regardless of course level) will be counted when calculating the student's graduate grade point average.

#### **Grade of Incomplete**

A grade of "I" (Incomplete) may be granted, at the option of the Instructor and the Department Chairperson, to a student who, due to serious, documented, and verifiable extenuating circumstances beyond his/her control (such as an illness requiring hospitalization) is unable to complete the work required to obtain a grade for a course. In no case shall a grade of "I" be granted

to a student because he/she is not passing a course and desires additional time to attempt to obtain a passing grade. A student granted a grade of "I" must complete the work deemed by the Instructor necessary to complete the course no later than two semesters after the grade was assigned to the student, or the grade shall automatically revert to a grade of "F" (failing grade).

### **Credit By Examination**

The Department does not generally offer credit by examination for required core courses or elective courses. A student with outstanding, exceptional and documented skills in a particular subject as well as an outstanding academic record may request credit by examination, and it is the option of the Department Faculty and the Department Chairperson whether to grant the request.

### **Credit For Non-College Learning**

The Department does not award credit for credit for non-college learning (life work experience).

### **Student Work**

The Department reserves the right to retain any and all student work for the purposes of record, exhibition or instruction.

### **Normal Academic Progress**

The student will have maintained normal academic progress when the student earns a minimum grade point average of 3.0 for all graduate work attempted.

### **Course Sequence and Prerequisites**

Course prerequisites are clearly indicated on the Graduate Program sheets, available in the Department of office. It is the students' responsibility, not the advisors', to ascertain that required pre-requisites have been taken and passed prior to registering for a course. Failure to comply with pre-requisite requirements may result in the student being dropped from or failed in a class without prior warning from the Instructor.

### **Probation or Suspension**

Students who do not make satisfactory academic progress may be excluded from further registration.

### **Class Attendance**

Class attendance may be required and may be used for grade determination at the option of the instructor.



### Graduation

In order to be eligible to graduate the student must have successfully completed his/her plan of study as established with the student's graduate advisor, his/her supervisory committee, and the Department Chairperson. This includes completion of all applicable graduate coursework with an overall minimum grade point average of 3.0 and no more than 6 credits of 5000 or 6000 level courses with an earned grade less than a "B." A student choosing the thesis option must also have submitted a complete masters thesis, whose format, content, and presentation must be acceptable to and approved by his/her graduate advisor, supervisory committee, and Department Chairperson. The student must additionally have successfully passed his/her final examination (See Examination, above).

Students should contact an advisor at least one semester prior to their projected graduation and request a review of his or her file. At the start of the final semester the student is required to complete and have his advisor approve an Application for Graduation, available from the Department. (See catalog for additional information on graduation procedures and scheduling.) If for any reason a student fails to graduate in the semester after applying for graduation, that student must reapply for graduation.

It is the student's responsibility, not his/her advisor's responsibility, to ascertain that all requirements for graduation, as stated in the University Catalog and in the Department Program sheets, have been met.

### Core Curriculum

All students working to obtain a Master of Science Degree in Construction Management must take the following seven courses (21 credits) as core requirements:

BCN 5626	Construction Cost Analysis & Control	3
BCN 5716	Productivity in Construction	3
BCN 5755	Construction Accounting & Finance	3
BCN 5772	Management of Construction Organizations	3
BCN 5784	Construction Information Services	3
BCN 6785	Computer Estimating and Cost Analysis	3
BCN 6935	Seminar on Construction Management	3

### Construction Management Electives

Students choosing the thesis option must take a minimum of 15 credits from the courses listed below, 6 of which may be BCN 6971, Thesis. Students choosing the non-thesis option must take a minimum of 18 credits from the courses listed below.

BCN 5022	Housing for Developing Countries	3
BCN 5706	Interdisciplinary Aspects of Housing	3
BCN 5735	Hazardous Materials & Waste in Construction	3
BCN 5771	Management & Marketing of Const. Services	3
BCN 5905	Directed Independent Studies <sup>1</sup>	3-6
BCN 5906	Special Topics	3-6
BCN 6473	Systems Approach for Housing Planning	3
BCN 6642	Value Engineering in Construction	3
BCN 6775	Decision & Risk Analysis in Construction	3
BCN 6786	Artificial Intelligence in Construction	3
BCN 6916	Developments in Construction Technologies	3
BCN 6971	Thesis <sup>1</sup>	3-6

<sup>1</sup>A student shall not register for BCN 6971, Thesis, without first having received the approval from his/her advisor, his/her supervisory committee, and the Chairperson of the Department. A student may not register for BCN 5905, Independent Studies, without first having received the approval of his/her advisor, the Department Graduate Committee, and the Chairperson of the Department.

### Course Descriptions

#### Definition of Prefixes

BCN-Building Construction

*Student programs of study in the graduate level program are carefully designed and sequenced following consultation with a graduate faculty advisor. Appropriate prerequisite coursework is assigned on the basis of individual needs.*

**BCN 5022 Housing for Developing Countries (3).** Problems faced by developing countries in housing their population. Political, economic, social, and technical considerations in decision process.

**BCN 5626 Construction Cost Analysis and Control (3).** Description of different types of estimating techniques in relation to different stages in a construction project. Productivity analysis, measurement of progress, and techniques of cost control are covered. Prerequisites: BCN 4612.

**BCN 5706 Interdisciplinary Aspects of Housing (3).** Recognition and definition of those factors which affect the planning, financing, and construction of housing projects. The operations and responsibilities of a multidisciplinary team dealing with decision process. This course takes a critical look at the housing delivery system to include: how the housing industry operates, various technologies prevalent in housing construction, and constraints to housing. The course will also look at the future, examining problems and forces that will shape opportunities.

**BCN 5716 Productivity in Construction (3).** An in-depth study of common issues relating to productivity improvements in construction. Prerequisite: BCN 4612 or equivalent.

**BCN 5735 Hazardous Materials and Waste in construction (3).** Discussion of the common hazardous materials and waste regulations found in construction activities.

**BCN 5755 Construction Accounting and Finance (3).** Money management in construction operations: financing, funding, sources of money, cash flow, disbursement, liability and bonding, and cost and managerial accounting, and profit analysis.

**BCN 5771 Management and Marketing of Construction Services (3).** Human effectiveness in marketing construction management services in the public and private sectors.

**BCN 5772 Management of Construction Organizations (3).** This course studies the management of a construction company. Topics included are: company organization, incorporation structures, policies and procedures, finance, accounting, information modeling, bidding strategies, and operation. Prerequisite: BCN 3753 or BUL 4320 or BCN 3740.

**BCN 5784 Construction Information Services (3).** The application of information management techniques, including computer hardware and software systems, to the analysis and solution of typical problems in the practice of construction management.

**BCN 5905 Directed Independent Studies (VAR).** Individual studies under supervision of faculty, tutor, or advisor.

**BCN 5906 Special Topics (VAR).** Intensive study for small group of students in a particular topic, or a limited number of topics not otherwise offered in the curriculum.

**BCN 6473 Systems Approach for Housing Planning (3).** Discussions of basic concepts of systems analysis and systems approach to the field of housing planning. The advantage of systems approach. Case studies.

**BCN 6642 Value Engineering In Construction (3).** Relationship of costs to time and life cycle of construction projects, and methods to improve the economic value of construction projects.

**BCN 6775 Decision and Risk Analysis In Construction (3).** Techniques of decision analysis for the medium to top level management personnel in the construction industry. Typical construction related problems that involve risk and uncertainty are studied. Prerequisites: STA 3132, BCN 3640, and BCN 4612.

**BCN 6785 Computer Estimating and Cost Analysis (3).** Application of computer software to rigorous exercises in construction estimating. Cost information related to construction with applications in current practice.

**BCN 6788 Artificial Intelligence Applications In Construction Management (3).** The course presents a study of the concepts, techniques, and applications of AI technology in the construction management domain. Prerequisites: COP 2172 and BCN 5784.

**BCN 6916 Developments in Construction Technologies (3).** Study of advanced field techniques and emerging uses worldwide. Information flow and creativity are highlighted as crucial elements which stimulate new developments. This course prepares the students to understand and deal with concepts of change. Prerequisite: BCN 5716.

**BCN 6935 Seminar on Construction Management (3).** Advanced study of problems, trends, and issues in a time of rapid change in building and management technology. Topics selected or developed by class.

**BCN 6971 Thesis (3-6).** Students develop a thesis under the direction of

a senior faculty mentor, and their supervisory committee, and advance and defend their propositions before an audience of peers, scholars, and their supervisory committee.

## Drinking Water Research Center

**William J. Cooper, Director**

The Drinking Water Research Center conducts basic and applied studies in the area of water resources as it relates to drinking water quality and quantity. The Center also provides the opportunity for undergraduate and graduate students to conduct independent research in cooperation with other departments in the University. See the General Information section 'Centers and Institutes' for more details regarding the Center.

### Staff

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**School of Engineering**

**Associate Dean Gustavo A. Roig**

**Assistant to the Dean Lourdes A. Meneses**

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**External Programs Neil Hout-Cooper**

**School of Design Iraj E. Majzoub**

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**International Institute for Housing and Buildings Oktay Ural**

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**STAC (Southern Technology Application Center) Osiris Villacampa**

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- Zhao, Fang, Ph.D.** (*Carnegie-Mellon University*), Assistant Professor, Civil and Environmental Engineering

## College of Health

The College of Health offers programs of professional study in the health professions and promotes articulation between the academic units and clinical, experiential settings. Approximately 300 different clinical centers are utilized in the various degree programs. The academic departments of the College offer courses of study leading to a baccalaureate degree in Dietetics and Nutrition, Medical Laboratory Sciences, Medical Record Administration, Occupational Therapy, Physical Therapy and Prosthetics and Orthotics. Master's degrees are offered in Dietetics and Nutrition, Medical Laboratory Science, Occupational Therapy, Physical Therapy, and Public Health. All degree programs are appropriately accredited by their respective professional accrediting body.

Applicants to the College must submit an Application for Admission to the University and must follow regular University procedures. Applicants must be eligible for admission to the University before being admitted to any degree program. Students interested in admission to any department or program in the College should contact the unit for specific prerequisites and admission requirements. Specialized admission procedures are required for the Dietetics Programs, Medical Laboratory Science, Occupational Therapy, Physical Therapy, and Prosthetics and Orthotics programs.

The mission of the College of Health is to:

1. Prepare health professionals at the undergraduate and graduate levels.
2. Perform basic applied research.
3. Provide services which respond to health needs at local, state, national, and international levels.

**Note:** The programs, policies, requirements and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature, changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Dietetics and Nutrition

**Katharine R. Curry, Professor,**

*Chairperson and AP Director*

**Penelope S. Easton, Professor**

*Emeritus*

**Evelyn B. Enrlone, Assistant Professor**

**Susan P. Hilmberg, Associate**

*Professor and Director, Coordinated Undergraduate Program*

**Michele W. Keane, Assistant Professor**

**Marcia Magnus, Associate Professor**

**Dian Weddle, Assistant Professor**

**Nancy S. Wellman, Professor**

The Department offers a graduate program leading to a Master of Science in Dietetics and Nutrition. The program is designed to meet the needs of professional practitioners as well as students with undergraduate degrees in related fields. There is an opportunity for students to complete the requirements to sit for the National Registration Exam for Dietitians by enrolling in the Approved Preprofessional Practice Program in conjunction with the master's program. In some cases prerequisites must be met before enrolling in graduate courses. Interested students should contact the department prior to applying for admission.

Minimum entrance requirements under current Board of Regents policy must be met. This includes a combined score of 1000 on the Verbal and Quantitative Aptitude Test of the Graduate Record Examination or a least a 'B' (3.0 on a 4.0 scale) average in all upper division work. Application procedures for admission are detailed in the discussion of the University procedures for admission to graduate study.

Students have the option of selecting a Clinical/Community Nutrition or Dietetic Management emphasis in their coursework. The Clinical/Community track allows emphasis in nutrition research or applied nutrition. Students may also prepare themselves for positions of responsibility in nutritional care community health agencies or private practice. The Management track broadens the concepts of management and develops managerial skills and expertise. Advanced courses in the School of Hospitality Management and College of Business Administration are recommended in the program of study.

Students who are candidates for the Master of Science degree in Dietetics and Nutrition must complete a minimum of 37 semester hours of graduate study including at least 30 hours at this University. All coursework must be recent enough to be relevant to the contemporary field of nutrition.

The Preprofessional Practice Program is currently granted approval status by The American Dietetic Association's Council on Education, Division of Education Accreditation/Approval, a specialized accrediting body recognized by the Council on Post Secondary Accreditation and the United States Department of Education.

The program begins each Fall semester and is completed by the following June. Students have the opportunity for supervised dietetic practice in outstanding health facilities in South Florida. Enrollment is limited to 6 students per year and requires a separate application available from the department. Application deadline is March 1 for Fall admission. Students who have never attended FIU must complete six hours of graduate work at FIU prior to the Fall admission date. To be eligible, students must have completed an ADA Didactic program and be admissible to the graduate program.

## Master of Science in Dietetics and Nutrition

Students' programs will be planned to support their career goals in consultation with the assigned faculty advisor. Retention and graduation in the master's program requires maintenance of a 3.0 GPA.

### Course Requirements

Required Research Core: (13-16)		
DIE 6568	Research Methods in Dietetics	3
DIE 6937	Graduate Seminar in Dietetics	1
STA 6166	Statistical Methods in Research	3
DIE 6971	Thesis in Dietetics	3-6
	or	
DIE 6908	Supervised Field Study in Dietetics	3

### Scientific Knowledge: (6-12)

### Application to Discipline: (6-12)

#### Clinical/Community Track

DIE 6368	Advanced Techniques in Dietetic Practice	2
DIE 6368L	Advanced Techniques in Dietetic Practice Lab	1

#### Management Track

DIE 6128	Advanced Management of Dietary Systems	3
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### Recommended Electives

Planned in conjunction with the faculty advisor.

## Master of Public Health

An MPH degree is offered by the Department of Health Services Administration, School of Public Affairs and Services, with a concentration in Nutrition in conjunction with the Department of Dietetics and Nutrition. The goal of this degree program is to prepare the public health nutritionist to take a leadership role on the public health management team and to become an expert technical resource person.

The specialty concentration in Nutrition is designed to provide a background in the science and practice of public health including program planning, management, and evaluation; human nutrition and food science and their relationships to health; and a working knowledge of public health nutrition programs and services.

The MPH Nutrition concentration requires 45 hours of graduate coursework including:

Public Health core curriculum	15-18
Nutrition required courses	15-18
Nutrition electives	3-6
Field experience	3
Field research project	3

Pursuit of this degree requires class attendance on both University campuses. Field experiences require transportation availability. Prospective students should contact both departments.

## Course Descriptions

### Definition of Prefixes

DIE-Dietetics; FOS-Food Science; FSS-Food Service Systems; HUN-Human Nutrition

**DIE 5247 Trends in Therapeutic Nutrition (3).** Evaluation and interpretation of current research in dietary care of metabolic diseases.

**DIE 5946 Advanced Practicum In Community Nutrition (1-6).** Pre-planned clinical experience at the professional level in community nutrition. Prerequisite: Permission of instructor.

**DIE 5947 Advanced Practicum In Dietetic Administration and Management (1-6).** Pre-planned clinical experience at the professional level in dietetic administration and management. Prerequisite: Permission of instructor.

**DIE 5948 Advanced Practicum In Clinical Nutrition (1-6).** Pre-planned clinical experience at the professional

level in clinical therapeutic nutrition. Prerequisite: Permission of instructor.

**DIE 6128 Advanced Management of Dietary Systems (3).** Application of management and organizational theory to dietetic systems in health and community institutions.

**DIE 6256 Enteral Nutrition (3).** The specific indications for enteral feeding are discussed with special emphasis on the unique requirements, and feeding techniques for specific disease states.

**DIE 6257 Parenteral Nutrition (3).** Clinical and metabolic advances in the parenteral feeding of the adult patient in relation to specific disease states.

**DIE 6259 Management of Nutrition Services (3).** Development and comparison of systems models used to plan, organize, staff, direct and control clinical nutrition services. Emphasis on cost effective/cost benefit analysis approach. Prerequisite: Graduate management course.

**DIE 6367 Entrepreneurial Dietetics (3).** Focus on the dietitian as a owner/partner or top level manager. Emphasizes business management principles as applied to dietetics and nutrition. Prerequisite: DIE 6128 or equivalent.

**DIE 6368 Advanced Techniques In Dietetic Practice (2).** Techniques and approaches in changing nutritional behavior, establishing private practice, providing dietetic services in various size institutions, hospitals, nursing homes, and in the community. Prerequisites: DIE 4435, DIE 4435L or equivalent. Corequisite: DIE 6368L.

**DIE 6368L Advanced Techniques In Dietetic Practice Lab (1).** Individual practice in conducting interviews, planning nutritional care, changing nutritional behavior, and providing dietetic consultation. Prerequisite: Permission of instructor. Corequisite: DIE 6368.

**DIE 6435 Dietetic Programs for Post Secondary Settings (3).** Review of techniques and materials. Emphasis on preparing documents for accreditation and approval of dietetic programs. Prerequisite: Permission of instructor.

**DIE 6564 Application In Dietetic & Nutrition Research (3).** Application of various computer software programs to research problems. Prerequisite: Permission of instructor.

**DIE 6568 Research Methods In Dietetics (3).** Consideration of scientific methods and theoretical orientation

as applied to research in dietetics. Special consideration given to various techniques of investigation, data collection, data organization, and interpretation. Prerequisites: Permission of instructor.

**DIE 6569 Case Study Method In Research (3).** Development and analyses of the case study method in research. Prerequisite: Permission of instructor.

**DIE 6578 Field Research Methods In Dietetics (2).** Application of field research methods in interpreting and designing research studies. Introduction to interdisciplinary research approaches. Prerequisite: DIE 6568.

**DIE 6906 Readings In Dietetics and Nutrition (1-3).** Individual advanced study in a comprehensive overview of dietetics and nutrition or in-depth advanced study of a specialty. Prerequisites: Permission of instructor and advanced standing in graduate program.

**DIE 6907 Individual Study In Dietetics (1-3).** Intensive individual investigation of a phase of dietetics. Emphasis on recent findings in dietetics and allied disciplines. Prerequisite: Permission of the Chairperson of the Department.

**DIE 6908 Supervised Field Study In Dietetics (3).** Pre-planned practical experience at the professional level in an area of dietetics. Critical written evaluation by the student, developed with frequent consultation and supervision of instructor. Prerequisites: DIE 6578, 12 hours of graduate study, and permission of instructor.

**DIE 6915 Supervised Research (1).** Continuation of thesis or field research under thesis director or field study supervisor. Repeatable. Prerequisite: Completion of all other required coursework.

**DIE 6929 Specialized Short Courses In Dietetics and Nutrition (1-3).** Intense courses on specialized topics in dietetics and nutrition for the advanced student or professional. Topic based on current nutrition concerns. Prerequisites: Advance graduate standing and permission of instructor.

**DIE 6935 Special Topics In Dietetics (3).** In-depth study of historical, epidemiological, prevention, and treatment aspects of topics related to dietetics. Prerequisites: ADA Plan IV competence in topic covered, admission to graduate program.

**DIE 6937 Graduate Seminar In Dietetics and Nutrition (1).** Presenta-

tions by researchers, practitioners, and graduate majors related to advances in theories and applications in nutrition and dietetics. Two semester enrollment required of all graduate students.

**DIE 6971 Thesis in Dietetics and Nutrition (3-6).** Prerequisites: DIE 6578 or HUN 6811, 12 hours of graduate study and permission of Thesis Director.

**DIE 7437L Nutrition Counseling Supervision (2).** Covers techniques for advising on food choices and providing support for life style changes to meet wellness goals or treat diseases. Prerequisites: DIE 6368 and DIE 6368L.

**DIE 7566 Research Concept Development in Dietetics and Nutrition (3).** Grant proposal writing for dietetic and nutrition research. Prerequisite: DIE 6568.

**DIE 7980 Dissertation (3-12).** Research for doctoral dissertation. Prerequisite: Advancement to candidacy in doctoral program.

**FOS 6236 Food Toxicology and Food Safety (3).** Will cover causes of food borne illness, prevention procedures and methods for employee education. Prerequisites: Graduate standing and food science competency.

**FSS 6317 Human Resources Management in Nutrition Services (3).** Application of human resources theory to nutrition services; raising productivity and service quality. Prerequisite: Advanced management course.

**FSS 6367 Operations Analysis in Food Service and Nutrition Care Systems (3).** Models and methods of budget and service forecasting related to food service and nutritional care in large and small institutions of short and long term care. Prerequisites: Advanced graduate standing, DIE 6128 or equivalent.

**FSS 6535 Computer Assisted Food and Nutritional Services Management (3).** Advanced course in computer analysis and utilization for detection and resolution of problems of food service and nutritional care. Prerequisites: Advanced graduate standing, DIE 6128 or equivalent, and computer competency.

**FSS 6535L Computer Assisted Food and Nutritional Services Management Lab (1).** Laboratory application in computer analyses and utilization in food services and nutrition care. Prerequisite: Advanced Graduate Standing. Corequisite: FSS 6535.

**HUN 5123 Ethnic Influences on Nutrition and Food Habits (3).** Systematic study of food habits of various cultural groups. Emphasis on methodology, analysis of data, relationship of food habits to nutritional standards, and corrective measures. Includes laboratory. Prerequisite: Competency in food preparation and nutrition. Recommended for non-majors.

**HUN 5195 International Nutrition: Problems, Policies, and Planning (3).** Advanced study of magnitude, causes and nature of undernutrition in low income countries; emphasis on programs, planning and policies directed toward alleviating hunger. Prerequisite: Permission of instructor.

**HUN 5245 Nutrition and Biochemistry (3).** Advanced study of the relationship of nutrition and biochemistry with emphasis on digestion, absorption, metabolism of nutrients, and determination of norms. Prerequisites: ADA Plan IV and permission of instructor.

**HUN 5295 Contemporary Issues in Food and Nutrition (3).** Updating food and nutrition information through the study of current research. Recommended for non-majors.

**HUN 5611 Nutrition Education in the Community (3).** In-depth study of nutrition education information and methods in the community including the nutrition education component of school food service and other congregate meal programs. Prerequisite: Recent courses in nutrition education or permission of instructor.

**HUN 5621 Food, Nutrition and Communication (3).** Concepts and techniques for effective professional communication with individuals, groups and other professionals. Emphasis on communication via mass media. Prerequisites: Advanced standing, competency in food and nutrition knowledge.

**HUN 6195 Food Economics (3).** In-depth study of forces and policies affecting the procurement, preparation and utilization of food in society. Prerequisite: Advanced graduate standing.

**HUN 6248 Sports Nutrition (3).** The relationship between nutrition, fitness and athletic performance for trained and untrained athletes will be examined.

**HUN 6249 Nutrition and Physical Function (3).** Covers food intake relationships, physical development and physical performance. Emphasis will be on subgroups of the population. Prerequisites: Competence in nutrition

and physiology and advanced graduate standing.

**HUN 6254 Drug and Nutrient Interaction (3).** The interaction of drug and nutrient metabolism in relation to nutrition.

**HUN 6255 Nutrition in Wellness Program (3).** Covers content and importance of nutritional aspects of wellness education programs and interrelationships between nutrition and exercise in prevention of common diseases. Prerequisite: Permission of instructor.

**HUN 6257 Physio/Psychology of Food Intake (3).** Consideration of scientific inquiries into eating and drinking behavior which will assist in planning nutrition education/counseling. Prerequisites: DIE 6368 and DIE 6368L.

**HUN 6266 Nutritional Assessment (3).** In-depth study of the methodology and application of nutritional assessment. Prerequisites: Nutrition II, physiology, and biochemistry.

**HUN 6328 Protein, Carbohydrates & Lipids (3).** The biological, physiological, and metabolic functions of proteins, carbohydrates, and lipids as they relate to human nutrition.

**HUN 6335 Functions of Vitamins (3).** Integration of chemical, biological and physiological functions of vitamins as related to human nutrition.

**HUN 6355 Minerals in Human Nutrition (3).** The physiological and metabolic functions of selected macro- and trace minerals as they relate to nutritional status in humans.

**HUN 6408 Advanced Life Cycle Nutrition (3).** In-depth study of nutrient needs of individuals and groups at different stages of life. Emphasis on nutrient inter-relationships and effects of deficiencies and excesses on metabolism. Prerequisite: HUN 4241 or equivalent.

**HUN 6435 Nutrition and Aging (3).** Changes associated with aging and the impact of nutrition on these changes. Prerequisite: Permission of instructor.

**HUN 6521 Advanced Community Nutrition (3).** In-depth study of assessment of nutrition in population groups and needs of public for nutrition information. Emphasis on nutrition consultation for health professionals and dietary care. Prerequisite: DIE 3317 or equivalent.

**HUN 6522 Public Health Nutrition (3).** Development and assessment of nutrition programs for the general popula-

tion throughout the life cycle. Prerequisite: Permission of instructor.

**HUN 6811 Laboratory Research Methods in Dietetics (2).** Laboratory application of research methods in dietetics. Prerequisites: DIE 6568 and consent of department chairperson.

## Medical Laboratory Sciences

Patrick F. Shen, *Associate Professor and Chairperson*

Barbara V. Anderson, *Assistant Professor and Director, Medical Technology Program*

Jerry A. Bash, *Associate Professor*  
Manoucher Dezfoullan, *Associate Professor*

William J. Keppler, *Professor and Dean*

Janet A. Lineback, *Professor*  
Sylvia L. Smith, *Associate Professor and Associate Dean*

Beverly A. Warden, *Assistant Professor and Coordinator, Graduate Program*

## Master of Science in Medical Laboratory Sciences

Admission to the Master of Science degree program in Medical Laboratory Sciences represents a judgment as to the probability of the student's success in graduate work. This judgment is usually based on a variety of factors including the student's undergraduate academic record, specific admission test scores, letters of recommendation, and letter of intent. To be admitted, a student must meet the following minimum requirements:

1. Satisfactorily meet the University's general requirements for admission. (Consult the General Information section for details.)

2. Hold a bachelor's degree, or equivalent, in medical technology or related scientific discipline from an accredited institution. Students entering the program should have completed a minimum of two years of chemistry, one year of mathematics including statistics, two years of biology including immunology and biochemistry. A minimum of 12 semester hours of undergraduate clinical coursework in one of the specialty areas is also required for individuals who do not possess a bachelor's degree in medical technology or equivalent clinical experience.

An applicant lacking in course background may be admitted with deficiencies on condition that these deficiencies be made up within one year of the date of admission. Credits earned in making up these deficiencies will not count toward the graduate degree.

3. Have a minimum cumulative GPA of 3.0 during the last two years of the undergraduate program or a minimum combined score of 1000 on the quantitative and verbal portions of the Graduate Record Examination (GRE) (or a minimum combined score of 1500 on the three-part GRE).

4. Submit at least two letters of recommendation from academic professors, supervisors/employers and/or professional associates who are in a position to comment on the applicant's potential for graduate work.

5. Submit an autobiographical statement or letter of intent (not to exceed 1000 words) which includes educational goals and career projections. Applicants may also include copies of previous written scientific work.

6. Students whose native language is other than English must demonstrate an adequate level of proficiency in English as judged by a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Foreign students who have not met this requirement may be conditionally admitted and allowed to enroll in an intensive English language program prior to beginning coursework in medical laboratory sciences. Satisfactory English proficiency must be demonstrated within the first year of study.

7. Approval from the Departmental Graduate Committee.

### Degree Requirements

The Master of Science in Medical Laboratory Sciences consists of a minimum of 37 credits, including a thesis based upon the student's original research. A maximum of six credits of graduate coursework may be transferred from other institutions subject to approval of the Graduate Committee. It is expected that a full-time student taking nine credits per semester should be able to complete the program in two years.

Core Courses	12
Specialty Courses	9
Electives	6
Graduate Seminars	4
Thesis	6

### Core Courses

MLS 5175	Advanced Clinical Pathology	3
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MLS 5515	Advanced Diagnostic Immunology	3
MLS 5615	Research Instrumentation and Techniques in Medical Laboratory Sciences	3
MLS 5785	Research Methods in Medical Laboratory Sciences	3

### Specialty Courses: Clinical Chemistry

MLS 6645	Advanced Clinical Analytical Systems	3
MLS 6665	Clinical Endocrinology	3
MLS 5675	Clinical Protein Chemistry	3
MLS 5685	Therapeutic Drug Monitoring and Clinical Toxicology	3
MLS 5684	Metabolic Effects of Toxic Substances	3

### Specialty Courses: Hematology

MLS 5328	Diagnostic Hematological Cytology and Cytochemistry	3
MLS 6329	Hematological Oncology	3
MLS 5345	Advanced Hematology/Hemostasis	3

### Specialty Courses: Immunohematology

MLS 6575	Advanced Blood Banking	3
MLS 6595	Advanced Immunohematology	3
MLS 5590	Human Blood Group Systems	3
MLS 6944, 6945, 6946	Advanced Blood Banking Practicum I, II, III	3
MLS 5585	Human Histocompatibility Antigens	3

### Specialty Courses: Clinical Immunology

MLS 6180	Immunopathology	3
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### Specialty Courses: Clinical Microbiology

MLS 6425	Advanced Clinical Mycology	3
MLS 6468	Molecular Mechanisms of Infectious Diseases	3
MLS 5475	Medical Virology	3
MLS 5495	Agents of Foodborne Disease	3

### Electives

In consultation with the advisor, the student may select a maximum of six credits outside the Department of Medical Laboratory Sciences which are not limited to but may include courses in bio-



logical sciences, chemistry, health care administration, educational methodology, computer sciences, and business administration.

## Courses Descriptions

### Definition of Prefixes

**MLS - Medical Laboratory Sciences**

**MLS 5175 Advanced Clinical Pathology (3).** Advanced study of pathological conditions affecting the major organ systems with emphasis on clinical diagnosis using laboratory methods. Prerequisite: Graduate standing or permission of instructor.

**MLS 5328 Diagnostic Hematological Cytology/Cytochemistry (3).** Morphological, cytochemical, cytogenetic and immunological techniques for precise and accurate blood cell identification that provide invaluable information for diagnosis, treatment and prognosis. Prerequisite: Graduate standing or permission of instructor.

**MLS 5345 Advanced Hematology/Hemostasis (3).** An advanced course dealing with a number of selected topics of current interest in clinical hematology/hemostasis. Emphasis will be placed on erythrocyte disorders and blood coagulation. Prerequisite: Graduate standing or permission of instructor.

**MLS 5425C Medical Mycology (3).** Study of the essential procedures and criteria in the identification of pathogenic fungi. Recognition of fungal contaminants commonly encountered in clinical specimens. Actinomycetes. Antimicrobial agents. Mycoserology. Stains, reagents, and media. Prerequisite: Graduate standing or permission of instructor.

**MLS 5475 Medical Virology (3).** The nature of viruses and viral disease. Types of human viral infections, their detection and prevention. Current diagnostic procedures. Prerequisite: Graduate standing or permission of instructor.

**MLS 5495 Agents of Foodborne Disease (3).** Natural history of foodborne diseases. Microorganisms involved in food processing, food spoilage, food-borne illness and food intoxication. Investigation of foodborne diseases outbreaks. Prerequisite: MLS 4405 or permission of instructor.

**MLS 5515 Advanced Diagnostic Immunology (3).** A course describing the principles, performance, quality control

and applications of immunological methods used in clinical laboratories and research. Prerequisite: Graduate standing or permission of instructor.

**MLS 5585 Human Histocompatibility Antigens (3).** A comprehensive study of the serology, clinical relevance, immunology and genetics of the human histocompatibility antigens. Prerequisite: Graduate standing or permission of instructor.

**MLS 5590 Human Blood Group Systems (3).** An in-depth study of serology, clinical relevance, immunology, genetics and the biochemistry of the human red cell, white cell and platelet antigens and antibodies. Prerequisite: Graduate standing or permission of instructor.

**MLS 5615 Research Instrumentation and Techniques (3).** This course is designed to introduce the beginning graduate student to research instrumentation and techniques in the specialized areas of the medical laboratory sciences. Prerequisite: Graduate standing or permission of instructor.

**MLS 5675 Clinical Protein Chemistry (3).** Lectures dealing with isolation and identification of clinically significant proteins and enzymes. Pathological conditions and interpretation of laboratory data. Prerequisite: Graduate standing or permission of instructor.

**MLS 5684 Metabolic Effect of Toxic Substances (3).** General principles of toxicology as well as a discussion of types of tissue injury produced in organ systems. Prerequisite: graduate standing.

**MLS 5685 Therapeutic Drug Monitoring and Clinical Toxicology (3).** Lectures dealing with pharmacokinetic and pharmacodynamic principles, methods of analysis, medico-legal aspects of drug testing, quality assurance. Prerequisite: Graduate standing or permission of instructor.

**MLS 5785 Research Methods In Medical Laboratory Sciences (3).** Introduction to clinical and industrial research methods/experimental designs. Analysis of scientific literature. Review of statistical analysis of data. Prerequisite: Graduate standing or permission of instructor.

**MLS 6180 Immunopathology (3).** The student will study the pathology of immunological processes occurring naturally and/or under disease conditions. Prerequisite: Graduate standing or permission of instructor.

**MLS 6329 Hematology Oncology (3).** A detailed study of MLS hematological neoplasms, in which the etiology, pathophysiology, clinical and laboratory diagnosis of leukemias, lymphomas and other malignant diseases will be considered. Prerequisite: Graduate standing or permission of instructor.

**MLS 6425 Advanced Clinical Mycology (3).** Study of fungi which cause disease in man and animals. Application of genetic, biochemical and ultrastructural procedures in the identification of fungi including the use of monoclonal antibodies. Prerequisite: Graduate standing or permission of instructor.

**MLS 6468 Molecular Mechanisms of Infectious Disease (3).** Study of molecular mechanisms of microbial pathogenicity as it relates to human infections. Examination of the processes by which infection leads to disease. Disease prevention. Prerequisite: Graduate standing or permission of instructor.

**MLS 6575 Advanced Blood Banking (3).** A comprehensive study of the techniques and methods used to acquire, prepare, store, test and transfuse blood and its components. Prerequisite: Graduate standing or permission of instructor.

**MLS 6595 Advanced Immunohematology (3).** A comprehensive study of antigen-antibody reactions and analogous phenomena as they relate to the pathogenesis and clinical manifestations of blood disorders. Prerequisite: Graduate standing or permission of instructor.

**MLS 6645 Advanced Clinical Analytical Systems (3).** Current analytical concepts and analytical systems in clinical chemistry. Solid phase technology. Ion-specific electrodes. Centrifugal analyzers. Fluorescence polarization. Robotics. Prerequisite: Graduate standing or permission of instructor.

**MLS 6665 Clinical Endocrinology (3).** Lectures dealing with the anatomy, physiology and biochemistry of endocrine diseases. Laboratory testing procedures and approaches, clinical significance and interpretation of laboratory data. Prerequisite: Graduate standing or permission of instructor.

**MLS 6905 Independent Study (1-6).** In-depth study of a special topic requiring assigned readings, optional laboratory assignments, seminar participation, and final report. Prerequisite: Permission of instructor.

**MLS 6910 Directed Independent Research (1-6).** Investigation of a problem in the area of medical laboratory sciences requiring independent research at the graduate level. Supervision by graduate faculty. Prerequisite: Permission of advisor/instructor.

**MLS 6938 Graduate Seminar (1).** Oral presentation of literature review or research. Prerequisite: Graduate standing or permission of instructor.

**MLS 6939 Advanced Topics In Medical Laboratory Sciences (3).** Current topics in medical laboratory sciences not otherwise covered in the curriculum. Review of literature and discussion of the selected topics. May be repeated for credit with different subject content. Prerequisite: Graduate standing or permission of professor.

**MLS 6944 Advanced Blood Banking Practicum I (3).** A laboratory course providing in-depth practical experience in the various aspects of Blood Banking in a community blood center and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

**MLS 6945 Advanced Blood Banking Practicum II (3).** A laboratory course providing in-depth practical experience in the various aspects of Blood Banking in a community blood center and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

**MLS 6946 Advanced Blood Banking Practicum III (3).** A laboratory providing in-depth practical experience in the various aspects of Blood Banking in a community blood center and hospital transfusion service. Prerequisite: Graduate standing or permission of instructor.

**MLS 6971 Master's Thesis (1-6).** Supervised research on an original research project submitted in partial fulfillment of Master's degree requirement. Minimum requirement of six credit hours. Prerequisite: Permission of major instructor.

## Occupational Therapy

**Gail Hills Maguire, Professor and Chairperson**

**Reba L. Anderson, Associate Professor**

**Susanne D'Agati, Assistant Professor**

**Anne Dickerson, Assistant Professor**

**Anne H. Hull, Instructor**

**Susan Kaplan, Associate Professor**

**Suze Dudley, Assistant Professor**

**Patricia Michael, Assistant Professor**

### Master of Science in Occupational Therapy

The curriculum is composed of three main components: a core of occupational therapy courses to increase understanding of the theoretical bases and current issues of occupational therapy practice; a research core to develop critical problem solving, research, and writing skills; and a clinical specialty component that students design with approval of faculty. In the clinical specialty area, students have the opportunity to take four elective courses and develop projects and papers in addition to their thesis in their area of clinical interest. The course of study is designed for advanced study for certified occupational therapists and permits part-time enrollment.

### Admission Requirements

To be admitted to the Master's degree program students must:

1. Hold a bachelor's degree from an accredited institution. Students who do not hold a bachelor's degree in Occupational Therapy must complete the professional certificate in Occupational Therapy after admission to the graduate program.

2. Have completed an accredited curriculum in occupational therapy. Students who have not completed an accredited curriculum in occupational therapy can be admitted to the master's program, but must also complete the Professional Certificate in Occupational Therapy.

The certificate curriculum which is fully accredited by the American Occupational Therapy Association Certification Board includes 37 hours of mainly undergraduate courses plus fieldwork. Students may only take this curriculum in conjunction with the Master of Science in Occupational Therapy. Students apply to the university as graduate students.

3. Have a minimum of 3.0 GPA average based on a 4.0 scale in upper division courses of the bachelor's de-

gree, or a combined score of 1000 (verbal and quantitative parts) on the Graduate Record Examination (GRE). All students are required to take the GRE.

4. Have a basic statistics course.
5. Provide three letters of reference, a curriculum vitae/resume, a summary statement of professional and educational goals and assessment of current professional activities.
6. Receive approval from the departmental graduate admissions committee.
7. International students are accepted subject to space and fiscal limitations. Students must have a Bachelor's degree or equivalent in occupational therapy from an institution recognized in their own country as preparing students for graduate level study; academic eligibility for further study in their own country; demonstrate proficiency in the English language by a minimum score of 550 on the Test of English as a Foreign Language (TOEFL).

### Degree Requirements

The Master of Science in Occupational Therapy consists of 36 credits including a thesis. Fifteen credits of core courses must be taken in the department plus a minimum of six credit hours of thesis.

A maximum of six credits of graduate coursework may be transferred from other institutions, subject to the approval of the departmental graduate committee.

### Required Courses: (36)

#### Occupational Therapy Core

OTH 6009	Current Issues and Theories of Occupational Therapy	3
OTH 6265	Measurement and Assessment in Occupational Therapy	3
OTH 6215	Advanced Occupational Therapy Intervention Strategies	3
OTH 6948	Continuing Clinical Competence for Occupational Therapists	3

#### Research Core

STA 6167	Statistical Methods in Research II	3
OTH 5760	Current Research in Occupational Therapy	3
OTH 6970	Master's Thesis	6

#### Clinical Specialty Component

Combination of occupational therapy and university electives in an identified

area of clinical interest approved by the faculty. 12

## Occupational Therapy Certificate

The certificate program can only be taken concurrently with the Master of Science in Occupational Therapy. It is designed for the student who already holds a Bachelor's degree in a field other than occupational therapy. Students admitted to this program will apply to the occupational therapy department as graduate students.

The certificate curriculum will enable students to qualify for certification by the American Occupational Therapy Certification Board. Graduate students who hold a bachelor's degree in a field other than occupational therapy must complete this program.

### Prerequisites

Statistics, abnormal psychology, theories of personality, human growth and development, biology, biology lab, human anatomy<sup>1</sup>, human physiology<sup>1</sup>, neuroscience<sup>1</sup>, and medical terminology.

<sup>1</sup>These courses must be at the junior level or above. If not taken as prerequisite, they may be taken after admission to the certificate program.

### Required Courses: (64)

OTH 3351	Treatment Techniques in Psychiatric O.T.	1
OTH 3351L	Treatment Techniques in Psychiatric O.T.	2
OTH 3413	Applied Kinesiology	3
OTH 3413L	Applied Kinesiology Lab	1
OTH 3520	Developmental Theory I	2
OTH 3520L	Developmental Theory I Lab	1
OTH 4170L	Therapeutic Techniques	2
OTH 4210	Developmental Theory II	3
OTH 4315	Theory & Dysfunction in Psychiatric O.T.	2
OTH 4325	Evaluation & Treatment in Psychiatric Occupational Therapy	2
OTH 4325L	Evaluation & Treatment in Psychiatric Occupational Therapy Lab	1
OTH 4411	Pathology & Medical Surgical Disorders	3
OTH 4421	Biomechanics	2
OTH 4421L	Biomechanics Lab	2
OTH 4422	Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab	4

OTH 4422L	Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab	1
OTH 4761	Professional Issues	2
OTH 4851	Fieldwork Level II (Psychosocial Dysfunction)	12
OTH 4850	Fieldwork Level II (Physical Disabilities)	12
OTH 5162	Adaption of Human Occupation	3
OTH 5011	Theories & Practice of O.T.	3
OTH 5760	Current Research in O.T.	3

## Course Descriptions

### Definition of Prefix

OTH - Occupational Therapy

**OTH 5011 Theories and Practice of Occupational Therapy (3).** The theoretical foundations of occupational therapy and issues affecting profession practice.

**OTH 5162 Adaptation of Human Occupation (3).** Through development of an understanding of the components and nuances of human occupation, students will develop skills needed to promote optimal performance through simulation and adaptation of life tasks.

**OTH 5174 Advanced OT Techniques in Upper Limb Prosthetics and Orthotics (3).** Clinical OT techniques and pathomechanics applied to upper limb dysfunction including utilization of biofeedback and myoelectric components. Prerequisites: OTH 4421 and OTH 4170.

**OTH 5195 Occupational Therapy Job Modification (3).** Analysis and adaptation of client's workplace for the disabled. Prerequisite: Admission to program or permission of instructor.

**OTH 5326 Psychiatric O.T.: Contemporary Theory and Practice (3).** Examination of contemporary knowledge relevant to the theory and practice of O.T. in psychiatry. Prerequisite: Admission to Program or permission of instructor.

**OTH 5345 Occupational Therapy Program Development in Psychiatry (3).** Seminar discussion and practical experience in OT programming in psychiatry. Prerequisite: Admission to program or permission of instructor.

**OTH 5405C Analysis of Therapeutic Procedures in Physical Disabilities (3).** A lecture/lab course designed to introduce advanced students to theory

based assessment problem identification and treatment for the physically disabled adult.

**OTH 5406 Sensory Problems and Therapeutic Implications (3).** An in-depth study of sensory problems and the implications for therapy. A variety of patient populations and clinical applications will be discussed. Prerequisite: Graduate standing or permission of instructor.

**OTH 5407 Theoretical Perspectives of Pain (3).** Theoretical perspectives of pain: etiology, assessment, management and effects. Prerequisite: Admission to the program or permission of instructor.

**OTH 5440 Treatment Approaches for the Neurologically Impaired (3).** In depth instruction in approaches to the neurologically impaired patient. Emphasis will be on dysfunction due to stroke or head injury. Prerequisite: OTH 4422 or equivalent.

**OTH 5503 Current Occupational Therapy Practice in the Neonatal Intensive Care Unit (3).** Theoretical framework and guidelines for assessment and intervention in a neonatal intensive care unit. Prerequisite: Majors only.

**OTH 5600 Study of Gerontology as Related to Occupational Therapy (3).** An overview of current issues in the practice of occupational therapy for the aged.

**OTH 5613 Interdisciplinary Approach to Aging (3).** Issues related to roles of specific health team members and application of interdisciplinary approach to care of the elderly. Prerequisite: Aging course or work experience with elderly, permission of instructor.

**OTH 5630 OT Assessment of the Elderly (3).** Study of assessment techniques appropriate for OT evaluation of the elderly. Prerequisite: Admission to program.

**OTH 5760 Current Research in Occupational Therapy (3).** Review of statistical concepts and research procedures in the clinical setting, with in-depth study of the current status of research in occupational therapy.

**OTH 5764 Research in a Clinical Specialty (3).** Participation in ongoing research of faculty members in clinical specialty area. Prerequisite: Permission of instructor.

**OTH 5905 Independent Study (Variable Credit).**

**OTH 5934 Evaluation and Treatment of Hand Dysfunction (3).** Seminar in current issues related to the assessment and treatment of common injuries of the hand. Prerequisites: OTH 3413/3413L, OTH 4421 or equivalent.

**OTH 6009 Current Issues and Theories of Occupational Therapy (3).** Exploration of current issues and theories in occupational therapy leading to development of student's theoretical reference for practice. Prerequisite: Admission to the program.

**OTH 6215 Advanced OT Intervention Strategies (3).** Principles and characteristics of treatment regimens designed to enhance the study of treatment effectiveness. Emphasis on application of activity appropriate for student's clinical concentration. Prerequisite: Admission to program.

**OTH 6265 Measurement and Assessment in Occupational Therapy (3).** Measurement concepts and practices used in occupational therapy evaluation. Prerequisite: Admission to program or permission of instructor.

**OTH 6507 Occupational Therapy for Occupationally Dysfunctional Children & Adolescents.** Exploration of factors leading to successful adaptation to occupational roles, are explored with particular emphasis on the relationship between these factors and Occupational Therapy project. Prerequisite: Permission of instructor.

**OTH 6538 Advanced Methods in Pediatric Assessment (3).** Advanced applications of theory and research in the area of pediatric occupational therapy assessment. Skills in neonatal, neurodevelopmental, occupational behavior, and computer-assisted methods.

**OTH 6548 Advanced Methods in Pediatric Occupational Therapy (3).** Advanced application of theory and research in occupational therapy. Includes neurodevelopmental treatment approaches, neonates through adolescents. Prerequisite: OTH 6538

**OTH 6948 Continuing Clinical Competence for Occupational Therapists (3).** Design, execution, and presentation of a major Occupational Therapy project.

**OTH 6970 Master's Thesis (1-6).** Supervised research on a research project submitted in partial fulfillment of Master's degree requirement. Prerequisite: Permission of major professor.

## Physical Therapy

**Awilda R. Haskins, Assistant Professor and Chairperson**  
**Burton J. Dinevitz, Associate Professor**

**Leonard Elbaum, Associate Professor**  
**Jennifer Lander, Assistant Professor and Coordinator of Graduate Program**

**Elizabeth Revell, Associate Professor**  
**Colleen Rose-St. Prix, Assistant Professor**

**Stanley H. Wilson, Assistant Professor**

## Master of Science in Physical Therapy

The Master of Science in Physical Therapy is designed to enable physical therapists to pursue attainment of a specialty practice area through advanced education in their chosen profession. It is also designed to enhance the research, administrative and/or educational knowledge and skills of physical therapists.

The curriculum is comprised of three basic components: physical therapy courses designed to increase understanding of the theoretical basis and current issues of physical therapy practice; a research sequence designed to improve the physical therapist's ability to engage in research; and graduate level elective courses which will allow the physical therapist to obtain additional skills and knowledge in the areas of gerontology, health services administration, education, or other approved area of interest.

The program permits part-time as well as full-time study. The physical therapist who elects to complete the program on a full-time basis can complete the physical therapy coursework in four full semesters. All degree requirements must be completed within six years of the initial admission into the program.

The goals of the program are to:

1. Provide physical therapists with skills to enable them to function effectively in specialized clinical settings, research programs, educational programs and/or supervisory positions.
2. Prepare individuals who will contribute to the promotion of health in the community through the application of scientific principles of human movement to include identification, prevention, assessment and correction of acute or chronic movement dysfunction.
3. Provide physical therapists whose skills and knowledge are commensurate with the expanding need for health care services in South Florida,

as well as the rest of the state, nation and international community.

## Admission Requirements

Applicants to the program must meet the minimum standards set forth by the Florida Board of Regents and the University in addition to the Departmental requirements to include:

1. Bachelor's degree or the equivalent from an accredited institution.
2. Graduate of an accredited entry level physical therapy program.
3. One official copy of all college/university transcripts.
4. A minimum grade point average of 3.0 based on a 4.0 scale (upper division) or a combined score of 1000 (verbal and quantitative parts) on the Graduate Record Exam (GRE).
5. A minimum of three letters of recommendation to include one from each of the following persons: a college or university professor; a physical therapist; a current or past employer.
6. Submission of a curriculum vita/resume.
7. Submission of a summary statement of professional and educational goals and assessment of current professional activities (attached to resume).
8. Licensed to practice physical therapy in the state of Florida or other jurisdiction.
9. Approval from the departmental graduate admissions committee.
10. An applicant who fails to meet the regular admissions criteria may apply to be considered under the Board of Regents' 10% waiver policy (up to 10% of graduate students can be admitted in any one year as exceptions to the regular policy).
11. Graduates of non-U.S. institutions must be academically eligible for further study in the country where the degree was earned. If the applicant's native language is not English, the applicant must demonstrate proficiency in the English language by presenting a score of 550 or higher on the Test of English as a Foreign Language (TOEFL).

## Degree Requirements

The Master of Science in Physical Therapy consists of 36 credits including thesis. Fifteen credits of graduate level physical therapy courses and an advanced physical therapy research course must be taken. Additional required courses include a minimum of six graduate credits of out-of-department electives, an approved graduate level research course, and a graduate

level statistics course. The out-of-department electives will be determined by the student in conjunction with his or her physical therapy advisor.

A maximum of six credits of graduate work may be transferred from other institutions, provided they are approved by the departmental graduate committee and are in compliance with the University's graduate policies and procedures.

A maximum of 12 credits earned as a non-degree seeking student at the University may be accepted by the program, provided they are approved by the Departmental graduate committee and are in compliance with the University's graduate policies and procedures.

### Required Courses: (36)

All students accepted to the graduate program will develop individualized programs of study. The program of study must be approved by the physical therapy advisor and by the departmental graduate committee.

### Physical Therapy Courses

Approved Physical Therapy courses 15

### Research Component

STA 5126	Fundamentals of Design of Experiments	3
STA 6166	Statistical Methods in Research I	
PHT 6971	Master's Thesis	6

### Electives

Approved out-of-department graduate level electives	6
Approved out-of-department graduate level research course	3

## Course Descriptions

### Definition of Prefixes

PHT - Physical Therapy

**PHT 5045 Applied Educational Theory In Physical Therapy (3)** The application of teaching and learning principles to Physical Therapy patient education, student clinical education, and continuing education. A variety of teaching methodologies will be practiced by participants.

**PHT 5320 Advanced Pediatric Physical Therapy Assessment (3)** Analysis of assessment tools in relation to treatment. Competence in administration of appropriate tools will be required at end of course. Prerequisites: Either STA 5126 or STA 6166 and permission of instructor.

**PHT 5373 Advanced Therapy Assessment of the Elderly (3)** The study of assessment tools used in geriatric rehabilitation in relation to appropriate intervention strategies and research findings. Prerequisites: Appropriate adult motor development course/permission of major advisor.

**PHT 5515 Managing Therapy Services for Handicapped Children (3)** Lectures and group work to develop consulting and management skills of therapists who provide services to handicapped children. Prerequisites: Permission of major advisor or instructor.

**PHT 5639 Physical Therapy Administrative Techniques and Methods (3)** Provides an in-depth view of the health care industry and its relationship to the P.T. profession. Management techniques in all areas will be presented with emphasis on planning and financial management.

**PHT 5815 Clerkship In Physical Therapy (2)** Two-week full-time clinical experience combined with independent study of question or issue in clinical Physical Therapy. Prerequisites: Permission of major advisor.

**PHT 6127 Advanced Pathologic Movement Analysis (3)** Explores the abnormal gait and movement patterns as they relate to pathologic states involving either the musculoskeletal or the neurologic system, or both. Prerequisite: Permission of major advisor.

**PHT 6165 Applied Clinical Neuroanatomy (3)** Examines correlation of sites of pathology in the central and peripheral nervous systems with actual patients; their signs and symptoms, their regimen of treatment, and prognosis for rehabilitation. Prerequisites: Neuroanatomy and permission of major advisor.

**PHT 6237 Environments/Energy Expenditures of the Disabled (3)** Analysis of the home and work settings in relation to various forms of physical disabilities. Energy expenditures pertaining to environmental factors as they pertain to physical therapy evaluation and treatment. Prerequisite: Permission of major advisor.

**PHT 6238 Motor Development: Adult Through Geriatrics (3)** A study of motor development of the adult through old age. Application of developmental principles to physical therapy practice and research. Prerequisite: Permission of major advisor.

**PHT 6239 Developmental Disabilities in Adulthood (3)** A study of adults with developmental disabilities; including aspects of societal perspectives, political and public policy regarding the handicapped, and current theories in treatment of the handicapped adult population. Prerequisite: Permission of major advisor and instructor.

**PHT 6325 Advanced Clinical Pediatric Physical Therapy (3)** The study of theory, treatment and current clinical research in pediatric physical therapy practice. Prerequisite: Permission of major advisor and PHT 5320.

**PHT 6365 Theories In Sports Physical Therapy (3)** Study and exploration of relevant issues in sports physical therapy. Focus on problem identification, investigation, analysis, and problem solving approaches. Prerequisite: Permission of major advisor.

**PHT 6625 Advanced Physical Therapy Clinical Research Methodologies and Design (3)** Exploration of scientific method and theory as applied to clinical and experimental research in physical therapy; includes method of inquiry, techniques of data collection, organization, and interpretation. Prerequisites: STA 5126 or STA 6166 and permission of major advisor.

**PHT 6714 Spinal Dysfunction I (Lower Back) (3)** In-depth exploration of the evaluation and treatment of various lumbar spine dysfunctions. Prerequisite: Permission of major advisor.

**PHT 6715 Spinal Dysfunction II (Upper Back) (3)** In-depth exploration of the evaluation and treatment of various cervical spine dysfunctions. Prerequisite: Permission of major advisor.

**PHT 6716 Theories In Orthopedic Physical Therapy (3)** Study and exploration of relevant issues in orthopedic physical therapy. Focus on problem identification, investigation, analysis, and problem solving approaches. Prerequisite: Permission of major advisor.

**PHT 6718 Theories In Neuro-rehabilitation (3)** Examines current theories in neurorehabilitation as they pertain to physical therapy evaluation and treatment. Prerequisite: Permission of major advisor.

**PHT 6725 Extremity Evaluation and Rehabilitation (3)** In depth exploration, critical analysis, and investigation of joint and extremity dysfunctions. Prerequisite: Permission of major advisor.

**PHT 6905 Independent Study (1-3).** Individually determined, research-oriented, in-depth study of a physical therapy issue. An independent study contract must be approved by the instructor. Prerequisite: Permission of major advisor and Instructor. Must be fully admitted to the graduate program.

**PHT 6971 Master's Thesis (1-3).** Supervised research which demonstrates the application of analytical, conceptual and technical skills to a specific physical therapy problem. Prerequisite: Permission of major advisor.

## Public Health

**Joseph Patterson, Professor and Director**

**H. Virginia McCoy, Assistant Professor**

**Robert R. Stempel, Assistant Professor**

**Thomas J. Thompson, Assistant Professor**

## Master of Public Health

The Master of Public Health is an affiliated program offered with the Department of Epidemiology and Public Health at the University of Miami's School of Medicine.

The program is designed to provide fundamental skills in core areas of Public Health to persons involved in the policy development, planning, and implementation of community health services; and to serve those seeking a broader base of knowledge to improve environmental and personal health services for the community. This program prepares the practicing professional in the diverse fields of community health.

### Admission Requirements

Applicants must meet the University's general graduate admission requirements:

1. A bachelor's degree or equivalent from an accredited college or university or, in the case of foreign students, an institution recognized in its own country as preparing students for further study at the graduate level, and submit a score of 500 on the TOEFL.

2. A minimum 3.0 GPA (on the last 60 undergraduate hours), or a combined quantitative and verbal score of 1000 on the GRE taken within the last five years; or a score of 500 on the GMAT; passed the MCAT, LSAT, or equivalent; or a graduate degree from an accredited institution. However, all

applicants, regardless of previous GPA, are required to submit the appropriate aptitude test scores. In addition, applicants are required to 1) submit three letters of recommendation from persons in the field of public health and the academic major at the institution most recently attended; 2) have a personal interview with the Graduate Admission Committee; 3) submit a written personal statement as described in the application packet provided by the Department Public Health; 4) provide a current curriculum vitae/resume.

Students with diverse backgrounds will be encouraged to apply; relevant work experience will be given strong consideration.

### Field Training/Master's Research Project

All MPH students must complete either a field-training residency or a master's research project as a general core course requirement.

### Field Experience Option

This option is recommended for all students with less than three years of experience in health-oriented program. Field experience gives the student the opportunity to gain practical experience under preceptor-guided supervision in public health. Students should consult the Coordinator of Field Training for further information.

### Research Option

This option is recommended for students with three or more years of experience in a health-related program. The research project affords the opportunity to conduct research on a specific public health problem or topic in either a community or institutional setting. MPH students who select the research project must choose a faculty member to direct their research. The advisor and the student may identify other resource persons to serve in an advisory capacity for the research project.

### Degree Requirements

Students must complete at least 45 semester hours of approved coursework with a minimum of a 'B' average. All work applicable to the degree must be completed within six years immediately preceding the awarding of the Master's degree.

### Program of Study

The course of study is designed to allow students to concentrate in one of four areas:

Environmental Health  
Epidemiology

Health Promotion  
Public Health Policy and Administration

Courses for the Master of Public Health are divided into four major areas:

General Core (15 semester hours); Supervised Field Experience or Master's Research Project (3 semester hours); Concentration Core (18 semester hours); General Electives (9 semester hours).

### General Core Courses: (15)

PHC 6000	Introduction to Public Health Epidemiology	3
PHC 6315	Public Health and Environmental Management	3
PHC 6500	Foundations of Public Health Practice	3
PHC 6715	Survey Research in Public Health	3

### Field or Research Project: (3)

PHC 6945	Supervised Field Placement	3
	or	
PHC 6977	Master's Research Project	

### Environmental Health Concentration

(Offered in cooperation with the Department of Civil and Environmental Engineering) (12)

PHC 6150	Public Health Policy Analysis and Formulation	3
PHC 6311	Environmental Health Risk Assessment	3
PHC 6425	Legal and Regulatory Aspects of Environmental Health	3
PHC 6004	Injury Epidemiology and Prevention	3

### Concentration Electives: (9)

Select at least three courses from the following list:

ENV 5105	Air Quality Management	3
ENV 5356	Solid Wastes	3
ENV 5666	Water Quality Management	3
EVC 5421C	Industrial and Environmental Toxicology	3
EVR 5938	Topics in Environmental Studies	3
HSA 6155	Health Care Policy and Economics	3
HSA 6175	Financial Management of Health Systems	3
PHC 6501	Health Promotion Communication	3

PHC 6503	Communication Organization for Health Promotion	3
PHC 6520	Public Health Aspects of Foodborne Diseases	3
PHC 6539	Health Demography	3
General Electives:		3

**Epidemiology Concentration**

Epidemiology is the study of the distribution of diseases in the community and the factors influencing or determining this distribution. Interested students should contact the Department at 940-5538.

**Required Courses: (12)**

PHC 6016	Social Epidemiology Health Promotion and Policy	3
PHC 6539	Health Demography	3

(Additional courses will be taken in affiliation with the University of Miami, School of Medicine)

**Concentration Electives: (9)**

PHC 6004	Injury Epidemiology and Prevention	3
PHC 6009	AIDS Epidemiology and Control	3
PHC 6012	Current Research in Epidemiology	3
PHC 6014	Behavioral Epidemiology	3
PHC 6015	Epidemiological Methods	3
PHC 6115	International Public Health	3
PHC 6907	Independent Study: Public Health	1-3

**General Electives: (6)****Health Promotion Concentration****Required Courses: (12)**

PHC 6501	Health Promotion Communication Theory and Design	3
PHC 6503	Community Organization for Health Promotion	3
PHC 6580	Contemporary Issues in Health Promotion	3
PHC 6750	Program Development and Evaluation in Health Promotion	3

**Concentration Electives: (6)**

Select two courses from the following list:

PHC 6016	Social Epidemiology, Health Promotion and Policy	3
PHC 6112	Health Risk Appraisal	3
PHC 6150	Public Health Policy Analysis and Formulation	3

PHC 6311	Environmental Health Risk Assessment	3
PHC 6502	Health Promotion in the Workplace	3
PHC 6530	Principles of Maternal and Child Health	3
PHC 6585	Health Promotion in the Clinical Settings	3

**General Electives: (9)****Public Health Policy and Administration Concentration**

Emphasis is on Health Policy Analysis and Ambulatory Care Administration.

**Required Courses: (12)**

PHC 6150	Public Health Policy Analysis and Formulation	3
HSA 6155	Health Care Policy and Economics	3
HSA 6175	Financial Management of Health Systems	3
HSA 6149	Strategic Planning and Marketing of Health Services	3

**Concentration Electives: (6)**

Select two courses from the following list:

HSA 5225	Long Term Care Administration	3
HSA 6187	Personnel Management and Labor Relations	3
PHC 6112	Health Risk Appraisal	3
PHC 6425	Legal and Regulatory Aspects of Environmental Health	3
PHC 6503	Community Organization for Health Promotion	3
PHC 6530	Principles of Maternal and Child Health	3
PHC 6539	Health Demography	3

**General Electives: (9)****Course Descriptions****Definition of Prefix**

PHC - Public Health

**PHC 6000 Introduction to Public Health Epidemiology (3).** Introduction to the study of the distribution, determinants, and measurement of health and disease in populations, including study methods and their application to specific diseases and conditions.

**PHC 6004 Injury Epidemiology and Prevention (3).** Analyzes the impact and extent of injuries as a public health problem. Issues of prevention, sources of data, environment, social and occupational aspects are included in an

epidemiological approach. Prerequisite: PHC 6000.

**PHC 6009 Aids Epidemiology and Control (3).** Reviews the epidemiology, virology, immunology, and clinical aspects of HIV, and also examines its impact upon risk groups and the responses of society to the epidemic.

**PHC 6012 Current Research in Epidemiology (3).** This course will examine current areas of research in epidemiology and bring students into contact with researchers in various fields. Prerequisite: PHC 6000.

**PHC 6014 Behavioral Epidemiology (3).** This course will examine human behaviors as determinants of health and disease, methods of exploring these relationships, and ways of altering risk behaviors. Prerequisite: PHC 6000.

**PHC 6015 Epidemiological Methods (3).** This course will examine epidemiological methods emphasizing the actual conduct of studies. Students will undertake a simulated research project.

**PHC 6016 Social Epidemiology, Health Promotion and Policy (3).** Explores the epidemiological aspects of health and medical care of the poor and disadvantaged population groups. Emphasis on the relationship of organization and delivery of health care, including health promotion, prevention, and related topics. Prerequisite: PHC 6000.

**PHC 6112 Health Risk Appraisal (3).** Health promotion technique designed for identifying personal health risks and the use of these methodologies for inducing behavioral change. Evaluation of the effectiveness of various health appraisal instruments. Prerequisite: Biostatistics & PHC 6000.

**PHC 6115 International Public Health (3).** This course describes international differences in the distribution and determinants of disease and health, and examines interventions aimed at improving health status.

**PHC 6150 Public Health Policy Analysis and Formulation (3).** Strategies for formulating public health policy; political processes; resource allocation, organization, and participation. Examination of current policy issues and efforts to effect change.

**PHC 6311 Environmental Health Risk Assessment (3).** This course explores environmental health care management problems associated with risk to the population from exposure to

particular agents and conditions. Emphasizes practical problems in risk estimation through the case method approach. Prerequisite: PHC 6315.

**PHC 6315 Public Health and Environmental Management (3).** An overview of public health philosophy and government organization in the provision of official agency, environmental, and preventive medicine services, with particular emphasis on the regulatory and surveillance responsibilities authorized in the public sector. Prerequisite: PHC 6500 or permission of instructor.

**PHC 6425 Legal and Regulatory Aspects of Environmental Health (3).** The application of law as it relates to the environment and human health. Legal process and rule-making; cost-benefit analysis; judicial review; evidentiary problems; and other elements of environmental law are emphasized. Prerequisites: PHC 6000, Biostatistics and PHC 6315.

**PHC 6500 Foundations of Public Health Practice (3).** Philosophy, nature, and scope of public health; organization and administration; principles of disease prevention and health promotion; current issues and trends; socioeconomic and political forces. Prerequisite: Public Health major or permission of instructor.

**PHC 6501 Health Promotion Communication Theory and Design (3).** Theory, design, and implementation of health education communication utilized in reaching the public. Emphasis on the critical analysis of the communication processes; group techniques and media methods; and the consultation process. Prerequisite: Health Promotion Concentration or by permission of instructor.

**PHC 6502 Health Promotion in the Workplace (3).** Emphasis is on program design, management, and evaluation of health promotion in industry. Current issues on health assessment, fitness, and emotional stress in the workplace will be considered. Prerequisite: Health Promotion Concentration or permission of instructor.

**PHC 6503 Community Organization for Health Promotion (3).** Emphasis is on the diagnosis of community health problems and various organizational strategies utilized for effective solution. Review and analysis of community organization process; resources; and the role of health promotion specialists. Prerequisite: Health Promotion Concentration or permission of instructor.

**PHC 6520 Public Health Aspects of Foodborne Diseases (3).** Examines the scope of the foodborne disease problem; factors that contribute to outbreak of foodborne disease; strategies for the prevention and control of these diseases are explored. Prerequisites: PHC 6000, PHC 6315 and biostatistics.

**PHC 6530 Principles of Maternal and Child Health (3).** Covers the scope of the field of maternal and child health with emphasis on the needs of infants, children, youth, women and families in the reproductive cycle and programs designed to meet these needs. Prerequisite: Public Health major or permission of instructor.

**PHC 6539 Health Demography (3).** The study of basic population structure, composition, trends and relationship to health status. Implications of demographic trends, policies for public health; population growth, immigration, infant mortality. Prerequisites: Biostatistics or permission of instructor.

**PHC 6580 Contemporary Issues in Health Promotion (3).** Current problems and findings in health promotion content areas as smoking, alcohol, and drug misuse, family health, safety, physical fitness, communicable and chronic diseases will be discussed. Prerequisites: PHC 6000 and biostatistics.

**PHC 6585 Health Promotion in Clinical Settings (3).** Analysis of the role, methods, and techniques of health promotion and patient education pertaining to hospitals, clinics and other ambulatory health services. Prerequisites: PHC 6000 and biostatistics.

**PHC 6715 Survey Research in Public Health (3).** Health survey design, analysis and implementation, and interpretation of data. Emphasis on practical aspects of conducting health surveys. Study of existing health surveys. Prerequisites: PHC 6000 and HSC 5515.

**PHC 6750 Program Development and Evaluation in Health Promotion (3).** Principles and procedures in health promotion program development and evaluation. Emphasis on needs assessment, planning models, evaluation designs, data collection, analysis and reporting. Prerequisites: PHC 6000 and biostatistics.

**PHC 6907 Independent Study: Public Health (1-3).** Allows student investigations of special topics and issues utilizing literature searches, analysis, or active performance in public health settings under the direction of faculty su-

pervision. Prerequisite: Permission of the faculty advisor.

**PHC 6945 Supervised Field Experience in Public Health (3).** Preceptor guided experience in a public health organization. Experience will include orientation; observation; and participation in the aspects of the agency's program. Prerequisite: Permission of the faculty advisor.

**PHC 6977 Master's Research Project (3).** This course provides the student with an opportunity to explore in depth a specific topic or issue of interest in public health.

## College of Health

Dean William J. Keppler  
Associate Dean Sylvia Smith

### Chairpersons and Directors:

Dietetics and Nutrition	Katharine R. Curry
Health Information Management	Elizabeth M. Johnson
Medical Laboratory Sciences	Patrick Shen
Occupational Therapy	Gail H. Maguire
Physical Therapy	Awilda R. Haskins
Prosthetics and Orthotics	Ronald W. Splers
Public Health	Joseph Patterson

### Faculty

Anderson, Barbara V., M.S., M.T. (ASCP), S.B.B., (Ohio State University), Assistant Professor, Medical Laboratory Sciences  
Anderson, Reba L., Ph.D., O.T.R./L., F.A.O.T.A., (University of Florida), Associate Professor, Occupational Therapy  
Bash, Jerry A., Ph.D., M.T. (ASCP), (State University of New York at Buffalo), Associate Professor, Medical Laboratory Sciences  
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Bliby, David W., B.S.C.P. (University of Toledo), Instructor, Prosthetic Program Coordinator, Prosthetics and Orthotics  
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- Lineback, Janet A., Ph.D., M.T.**  
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- Maguire, Gail H., Ph.D., O.T.R./L.,  
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- Patterson, Joseph, Dr. P.H.**  
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Dean, Medical Laboratory Sciences**
- Spiers, Ronald W., M.Sc., C.P.**  
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- Stempel, Robert, Dr. P.H., (University  
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Professor, Dietetics and Nutrition
- Wellman, Nancy S., Ph.D., R.D.**  
(University of Miami), Professor,  
Dietetics and Nutrition
- Wilson, Stanley H., M.S., P.T. (St.  
Thomas of Villanova University),  
Assistant Professor, Physical  
Therapy**

## School of Hospitality Management

Anthony G. Marshall, *Dean and Professor*

Rocco M. Angelo, *Associate Dean and Professor*

Lee C. Dickson, *Assistant Dean and Associate Professor*

Elio Bellucci, *Associate Professor*

M. Chase Burritt, *Visiting Assistant Professor*

Patrick J. Cassidy, *Lecturer*

Perclval Darby, *Assistant Professor*

Patricia Deveau, *Assistant Professor*

Richard Donnelly, *Assistant Professor*

Peter Goffe, *Associate Professor*

Eric Green, *Visiting Assistant Professor*

David Grier, *Instructor*

Fritz G. Hagemeyer, *Associate Professor*

Albert J. Haleblan, *Associate Professor*

T. Michael Hampton, *Visiting Lecturer*

William M. Hansen, *Adjunct Lecturer*

William Hebrank, *Adjunct Lecturer*

Michael E. Hurst, *Professor*

Charles L. Ilvento, *Associate Professor*

Lendal Kotschevar, *Professor*

Steven V. Moll, *Associate Professor*

Alisa Moncarz, *Associate Professor*

Michael J. Moran, *Lecturer*

William J. Morgan, Jr., *Professor*

William O'Brien, *Associate Professor*

Alan J. Parker, *Professor*

Barry L. Perl, *Lecturer*

Nestor Portocarrero, *Associate Professor*

Roger Probst, *Lecturer*

Joan S. Remington, *Visiting Assistant Professor*

Norman H. Ringstrom, *Professor*

Kevin Robson, *Associate Professor*

William Stanford, *Lecturer*

David M. Talty, *Visiting Assistant Professor*

Mary L. Tenke, *Associate Professor*

Andrew N. Vladimir, *Assistant Professor*

Jeffrey M. Wachtel, *Associate Professor*

Mickey Warner, *Associate Professor*

Theodore White, *Lecturer*

The School of Hospitality Management offers Bachelor's and Master's programs that combine practical experience with classroom theory to assist the student to gain the understanding, skills, and techniques needed to qualify for job opportunities, or to achieve his or her career goals in the hospitality industry.

With the cooperation of industry executives, the School has created an internship program which literally utilizes the hotels, motels, restaurants, clubs, airlines, travel agencies, and cruise lines as practice labs for students. The advanced phase of the internship program provides each student a structured and closely supervised management experience normally not available to a student until he or she has entered the industry after graduation.

An Industry Advisory Board - which includes outstanding executives in the hotel, food and travel industries - works regularly with the faculty, staff, and students of the School to formulate and update a curriculum that is current, flexible, and related to the needs of the hospitality industry.

The School has been designated a Program of Distinction by the Florida Board of Regents.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

### Admission

Applicants to the School must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the School.

Each candidate for admission to the graduate program must present his or her score on the GRE or the GMAT and proof of a Bachelor's Degree from an accredited institution.

To be admitted, a candidate must have maintained a 'B' average in all upper divisional work or attained a minimum score of 1000 on the GRE (verbal and quantitative aptitude sections) or attain a minimum score of 450 on the GMAT. A minimum TOEFL score of 500 is required for international applicants.

Applicants who meet admissions criteria but do not have undergraduate preparation in Hospitality Management must complete a series of undergraduate preparatory courses. Specific courses will depend upon the individual's undergraduate preparation. Twenty-four credit hours of preparatory courses normally will be required. A maximum of six semester hours of

graduate credit may be transferred from any other university or from the graduate programs of this University.

Additional information on admission procedures may be found in the Admission section of the Catalog.

### Non-Degree Seeking Students

A number of persons currently employed in the hospitality field may not have the educational requirements to meet degree admission standards, but may be interested in enrolling in certain specific courses to improve their skills and to enhance their chances for promotion. Any person currently employed in the field may register as a Non-Degree Seeking Student for a total of 15 semester hours.

## Master of Science in Hotel and Food Service Management

### Course Requirements: (39)

HFT 5476	Feasibility Studies for the Hospitality Industry <sup>1</sup>	3
	or	
HFT 5478	Restaurant Development <sup>1</sup>	
HFT 6227	Hospitality Management Training Systems <sup>1</sup>	3
HFT 6246	Organizational Behavior in the Hospitality Industry	3
HFT 6296	Seminar in Hospitality Management	3
HFT 6446	Hospitality Industry Organizational Information Systems	3
HFT 6477	Financial Management for the Hospitality Industry	3
HFT 6586	Research and Statistical Methods	3
HFT 6697	Hospitality Law Seminar	3
HFT 6946	Graduate Internship	3
	Electives: (5000 and 6000 level)	12

<sup>1</sup>In place of the three following courses - HFT 5476 (or HFT 5478), HFT 6227 and one elective, the student may choose to complete HFT 6916 Hospitality Industry Project which carries a nine credit hour requirement.

## Course Descriptions

### Definition of Prefixes

FSS - Food Service Systems; HFT - Hotel, Food, Tourism.

F - Fall semester offering; S - Spring semester offering; SS - Summer semester offering.

FSS 6106 Purchasing and Menu Planning (3). Advanced information on sources, grades and standards, criteria

for selection, purchasing and storage for the major foods, including development of specifications. Consideration of the menu pattern with particular emphasis on costing, pricing, and the work load placed on the production staff. Item analysis and merchandising features are emphasized. (S)

**FSS 6365 Food Service Systems (3).** Principles of system analysis applied to the food service industry. Attention is given to the organization of modern food production, preparation, and distribution systems. Case study problems require application of economic and management principles for solution.

**FSS 6452 Advanced Food Service Design Operations (3).** Advanced planning, programming, and project documentation for commercial food service facilities. Spatial, environmental, and electro-mechanical design factors are stressed, with particular emphasis on efficiency modulation and investment aspects. Recommended: HFT 3343 or FSS 4431.

**FSS 6834 Food Service Research (3).** The planning, executing, and reporting of an individual research project dealing with significant problems in food service. Students demonstrate an understanding of research techniques through data collection, evaluation, and interpretation.

**HFT 5476 Feasibility Studies for the Hospitality Industry (3).** A survey of various theories and techniques available by which management may determine the financial feasibility of investments in the hospitality field. Prerequisites: HFT 3503 and HFT 4464. (S,SS)

**HFT 5478 Restaurant Development (3).** A study of the procedures to research and develop a restaurant form concept to opening. Emphasis will be on market research, site development, financial feasibility, and the formulation of an operating plan for an individual restaurant. Prerequisites: HFT 3503 and HFT 4464. (F,SS)

**HFT 5595 Problems in Marketing (3).** Team-work analysis and recommended solution of an actual marketing problem which has been posed by a local operator. Prerequisite: HFT 3503. (F)

**HFT 5655 Franchising and Management Contracts (3).** A comprehensive course designed to examine the franchise/franchisor - owner/manager relationships in hotel and food service operations and the mutual obligations

created by each type of contract. Prerequisite: HFT 3603.

**HFT 5718 Quality Controls In Tourism (3).** A study of contemporary social and human factors which influence actions and interactions between consumers and producers in tourism related industries. Prerequisite: HFT 3700. Corequisite: HFT 3733 or HFT 3753.

**HFT 5719 Implementation and Management of Tourism Projects (3).** Practical development, implementation, and management of tourism projects and programs with emphasis on international and developing nation situations. Prerequisites: HFT 3700 and HFT 3793 or equivalent.

**HFT 5901, 5906, 5911 Independent Studies (VAR).** With permission from the Associate Dean, students may engage in independent research projects and other approved phases of independent study. (F,S,SS)

**HFT 6225 Multicultural Human Resources Management for the Hospitality Industry (3).** A study of personnel and consumer relations in the hospitality industry within a multicultural, multiracial, and multiethnic society through an examination of value systems and cultural characteristics. Prerequisite: HFT 4224 or equivalent. (F,S)

**HFT 6226 Motivation and Leadership (3).** Study of motivation, perception, learning, attitude formation, incentive theory, and job satisfaction, with emphasis on leadership and group task performance. (F,S)

**HFT 6227 Hospitality Management Training Systems (3).** A course designed to provide applications of proven training systems and methods for managers in the hospitality industry. The case study method will be used. (F,S)

**HFT 6246 Organizational Behavior In the Hospitality Industry (3).** A survey of the concepts of organizational behavior and industrial psychology theory, from both the research and practical points of view. The course is designed to assist students in making sound decisions in the hospitality area by making them sensitive to the organizational parameters which influence their decisions. (F,S)

**HFT 6256 International Hotel Operations (3).** A consideration of various environments within which the international hospitality firm operates. Organizational, financial, and market-

ing factors are of major concern. Emphasis is placed on those problems and constraints which are uniquely different from problems of firms engaged in domestic operations of a similar nature.

**HFT 6296 Seminar In Hospitality Management (3).** Attention is focused on major problems facing management in today's economy. Special emphasis is placed on the food service industry. Research of the current literature, class analysis, and discussion. (F,S)

**HFT 6297 Seminar In Management Methods (3).** Class will be divided into small groups, each of which will meet regularly with the executive committee of an area hotel or restaurant. Each group will be, in reality, the junior executive committee for the property. The groups will come together periodically for analysis and discussion of their experiences, and to relate their experiences to principles of modern management. (F,S,SS)

**HFT 6447 Hotel Information Systems (3).** A seminar on computer systems and their applications within the hotel industry. An intensive study of a computerized property management system. All computer applications are examined, from reservations to the back office through a series of assignments and projects. Prerequisites: HFT 3423 or HFT 6446 and permission of instructor. (F,S,SS)

**HFT 6446 Hospitality Industry Organizational Information Systems (3).** An introduction to the general concepts and equipment that support information management by computer within the Hospitality Industry. Data file handling and other information management techniques are stressed. Students are first required to write application programs, then to complete a series of assignments utilizing application programs relating to guest cycle management on the school's computerized property management system. (F,S,SS)

**HFT 6456 Operations Control (3).** Focus is directed to the information used in the decision process and the information flow associated with each decision process throughout hotel or restaurant enterprises.

**HFT 6477 Financial Management for the Hospitality Industry (3).** A study of the principles of financial management and their application to the hospitality industry. Discussion and case studies are used to develop plans for meeting financial needs (short, inter-

mediate, and long term) from internal sources or capital markets. Attention is focused on capital budgeting, leasing, franchising, mergers, consolidations, and current financial issues in the hospitality industry. Prerequisite: HFT 6446. (F,S,SS)

**HFT 6486 Investment Analysis for the Hospitality Industry (3).** Advanced investment methods and opportunities with emphasis on securities of the hospitality industry, financing techniques, syndication, negotiations.

**HFT 6494 Restaurant Information Systems (3).** An in-depth study of principles relating to use of computer systems in the restaurant industry. The student is required to implement a simulated restaurant on two computer systems maintained by the school. This simulation includes personnel files, daily management, menu explosion and analysis, and inventory tracking. In addition, a research project will be assigned. Prerequisites: HFT 3423 or HFT 6446 and permission of instructor. (F,S,SS)

**HFT 6586 Research and Statistical Methods (3).** A study of basic research methodology as applied to a variety of hospitality industry research projects. Techniques for data collection and interpretation, and methods of reporting are considered. (F,S)

**HFT 6596 Marketing Management (3).** Team-work analysis and recommended solution of an actual marketing problem which has been posed by a local operator. Prerequisite: HFT 3503.

**HFT 6605 Legislation and the Hospitality Industry (3).** An advanced study of the legislative requirements imposed upon hospitality industry operators. Special emphasis is placed on the minimum wage law, sales tax, uniform provision and maintenance, tip credit, the determination of what constitutes hours worked for the various job categories, discrimination, and sexual harassment. Prerequisite: HFT 3603. (F,S,SS)

**HFT 6697 Hospitality Law Seminar (3).** New laws and their impact on the hospitality industry are examined. Students research and publish 'industry alert bulletins,' explaining the impact of new legislation on the hospitality industry. Prerequisite: HFT 3603. (F,SS)

**HFT 6916 Hospitality Industry Project (3-9).** An individualized research project dealing with current problems in the hospitality industry. Topics and research methods must be

approved by the graduate faculty before registration for the course. (F,S,SS)

**HFT 6946 Graduate Internship (1-3).** Structured graduate management experience in a specialized field in the hospitality industry. Programs include: food and beverage management, rooms division management, sales management, catering management, fast food service management, and restaurant management. Report required. Prerequisite: Permission of the instructor. (F,S,SS)

## School of Hospitality Management

Dean **Anthony G. Marshall**  
Associate Dean **Rocco M. Angelo**  
Assistant Dean **Lee C. Dickson**

### Faculty

**Angelo, Rocco M., M.B.A.** (University of Miami), Professor, Management and Associate Dean

**Beilucci, Elio, J.D.** (Boston College), Associate Professor, Law

**Burritt, M. Chase, B.S.** (Cornell University), Visiting Assistant Professor, Management

**Cassidy, Patrick, B.S.** (Florida International University), Lecturer, Wine Technology

**Darby, Percival, M.S.** (Florida International University), Assistant Professor, Management

**Deveau, Patricia M., M.S.** (University of New Haven), Assistant Professor, Information Systems Management

**Donnelly, Richard, M.S.** (Florida International University), Assistant Professor, Food Management

**Dickson, Lee C., M.B.A.** (Babson College), Associate Professor, Management and Marketing and Assistant Dean

**Goffe, Peter, J.D.** (University of Miami), Associate Professor, Marketing

**Green, Eric, B.S.** (New York University), Visiting Assistant Professor, Accounting and Finance

**Grier, David, Instructor, Beverage Management**

**Hagenmeyer, Fritz, G., M.A.** (Cornell University), Associate Professor, Hotel Engineering

**Halebian, Albert J., B.S. C.P.A.** (Cornell University), Associate Professor, Accounting and Finance

**Hampton, T. Michael, M.S.** (Florida International University) Visiting Lecturer, Marketing

**Hansen, William M., M.S.** (Florida International University), Adjunct Lecturer, Food Management

**Hebrank, William, B.S.** (University of Illinois) Adjunct Lecturer, Wine Technology

**Hurst, Michael E., M.A.** (Michigan State University), Professor, Management

**Iivento, Charles L., M.B.A., C.P.A.** (Cornell University), Associate Professor, Accounting and Finance

**Kotschevar, Lendal, Ph.D.** (Columbia University), Professor, Management

**Marshall, Anthony G., J.D.** (Syracuse University), Professor, Law and Dean

**Moll, Steven V., M.S.** (Florida International University), Associate Professor, Accounting and Information Systems Management

**Moncarz, Elisa, B.B.A., C.P.A.** (Bernard/Baruch College, City U. of New York), Associate Professor, Accounting and Finance

**Moran, Michael J., B.S.** (Florida International University), Lecturer, Food Management

**Morgan, William J., Jr., Ph.D.** (Cornell University), Professor, Management

**O'Brien, William, M.S.** (Florida International University), Associate Professor, Information Systems Management

**Parker, Alan J., Ph.D.** (Columbia University), Professor, Information Systems Management

**Peri, Barry L., M.S., C.P.A.** (Florida International University) Lecturer, Accounting and Finance

**Portocarrero, Nestor, B.B.A. C.P.A.** (University of Miami), Associate Professor, Accounting and Finance

**Probst, Roger, B.S.** (University of New Haven), Lecturer, Food Management

**Remington, Joan S., J.D.** (Willamette College), Visiting Assistant Professor, Tourism and Marketing

**Ringstrom, Norman H., Ph.D.** (State University of Iowa), Professor, Management

**Robson, Kevin, M.S.** (Florida International University), Associate Professor, Food Management

**Stanford, William, Lecturer, Food Management**

**Talty, David M., B.S.** (Florida State University), Visiting Assistant Professor, Management.

**Tanke, Mary L., Ph.D.** (*Purdue University*), Associate Professor, Management

**Vladimir, Andrew, M.S.** (*Florida International University*), Visiting Assistant Professor, Management

**Wachtel, Jeffrey M., Ph.D.** (*Georgia State University*), Associate Professor, Management

**Warner, Mickey, Ed.D.** (*Florida International University*), Associate Professor, Food Management

**White, Theodore, B.S.** (*Florida International University*), Lecturer, Club Management

## School of Journalism and Mass Communication

**J. Arthur Heise**, *Professor and Dean*  
**Lillian Lodge Kopenhaver**, *Professor and Associate Dean*

**Debra Miller**, *Assistant Professor and Assistant Dean*

**William Adams**, *Associate Professor*  
**Gerardo Bolanos**, *Deputy Executive Director, CAJP*

**James E. Couch**, *Associate Professor*  
**Humberto Delgado**, *Associate Professor*

**Charles Fair**, *Associate Professor*  
**Charles Green**, *Executive Director, Central American Journalism Project*

**Kevin Hall**, *Editor-in-Residence*  
**Laura Kelly**, *Assistant Professor*

**David L. Martinson**, *Associate Professor*

**Agatha Ogazon**, *Program Coordinator, CAJP*

**Patricia B. Rose**, *Associate Professor*  
**Denise Shomally**, *Academic Coordinator, CAJP*

**Robert Rutenberg**, *Associate Professor*

**Mel Stein**, *Creative Director-In-Residence*

**Lorna Veraldi**, *Assistant Professor*  
**Jack Virtue**, *Associate Executive Director, CAJP*

**William F. Wright**, *Associate Professor*  
**Kak Yoon**, *Assistant Professor*

## Master of Science in Mass Communication

The graduate program of the School of Journalism and Mass Communication offers professional education leading to the M.S. in Mass Communication with specializations in print journalism, student media advising and public relations. The orientation of the graduate program is primarily professional, not theoretical. The program is designed to enhance graduates' abilities to work in the mass communication professions.

### Admission Requirements

To be eligible for admission to the graduate program, applicants must meet the following requirements:

1. All applicants must have a bachelor's degree from a regionally accredited college or university.

2. All candidates must show promise of success in graduate studies. The faculty will consider the following criteria in making this determination:

#### a. Grade Requirements

Minimum GPA: Candidates must have a minimum grade point average (GPA) of 3.0 earned during the junior and senior undergraduate years.

Graduate Record Examination (GRE): The GRE or - upon request from the candidate in certain cases - the Graduate Management Admission Test (GMAT) is required. Passing score for the GRE is at least 1000; passing score for the GMAT is 500. However, if the undergraduate GPA is higher, a lower GRE score can be accepted. No applicant will be admitted to the master's program if his or her GRE score is lower than 850 or GMAT score is lower than 425 or if he/she scores lower than 500 on the verbal portion of the GRE or lower than the 55th percentile on the verbal portion of the GMAT.

Applicants who have taken the GRE more than five years from the date of admission have to repeat the GRE examination.

b. Professional experience in a field directly related to the specialization the student plans to pursue is an advantage. Applicants without such professional experience may be required to complete up to 9 credits of additional undergraduate coursework or to complete an internship with a professional organization. After an interview with the applicant, the faculty advisors of the respective sequences determine the amount of undergraduate work and the undergraduate courses to be completed.

c. A detailed statement explaining why the applicant wants to pursue the M.S. in Mass Communication.

d. Competence in the fundamentals of statistics is required. This can be demonstrated by students showing that a course has been taken in statistics before registering for MMC 5445. A student who has not taken a statistics course must take one from the SJMC approved list.

e. Students must also, as a part of the admissions process, complete a one-hour writing sample on a date announced by the SJMC and complete an oral interview with the appropriate sequence coordinator.

3. All candidates whose native language is not English must present a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). This requirement may be modified for applicants for special versions of the master's program taught, in part, in languages other than English. Candidates who have passed a TOEFL more than two years before they apply for admission to the program have to repeat the test with the required score.

### Application Procedures

A student applying for admission to the graduate program must:

1. Submit an application for admission to the University Admissions Office.
2. Have two official copies of transcripts from all colleges or universities attended sent to the Admissions Office. (Copies submitted by applicants will be rejected.)
3. Submit scores of the GRE and TOEFL to the Admissions Office.

### Admission Deadline

Students wishing admittance to the graduate program must apply at least six weeks prior to the start of classes of their first term of graduate study.

### Degree requirements

#### Plan of Study

During the first semester, students working with faculty advisers will plan their pursuit of the master's degree. The study plan will include a timetable for completion of the work. Any changes in the plan must be approved by the student's advisor. It is the student's responsibility to become familiar with the SJMC Graduate Handbook which lists all requirements for the degree.

#### Writing Proficiency

Students must take a writing proficiency exam, which includes grammar and syntax. The exam must be taken within the student's first semester on campus. Students who fail the test must complete the school's undergraduate writing course, MMC 3101, with a grade of 'B' or better. (No graduate credit is given for this course.) Students may take no more than nine graduate credits - and no professional courses - until they pass the writing proficiency exam or MMC 3101. Students must be able to use a typewriter or have word processing skills.

#### Transfer Credit

Students may petition the appropriate sequence coordinator to transfer up to six hours of graduate credit toward the degree. To be approved for transfer, the courses must have been previously taken at a regionally accredited college or university; the student's advisor must judge the courses relevant to the student's plan of study; the student must not have used the credits toward another degree; and the student must have earned a 'B' or higher in the courses. No transfer courses will substitute for skills courses in any area of specialization in the SJMC master's pro-

gram. All transfer credit must have been completed within the six-year period preceding the date the degree is granted.

### Time Limit

All work applicable to the degree, including transfer credit, must be completed within six years.

### Grades

Students must maintain a minimum GPA of 3.0 in all courses required for the degree. No more than two 'C' grades will be allowed.

### Foreign Language Requirements

No foreign language will be required unless the student's plan of study includes proficiency in another language.

### Professional Project, Thesis

Students complete a professional project in their areas of specialization. Work on the project will generally be taken during the final semester. Projects will be graded by an evaluation committee. Students must receive a 'B' or higher on the project for it to be accepted. Students may also opt to do a thesis; grade requirements are the same.

### Required Courses

To earn the M.S. in Mass Communication, students must meet the following requirements:

1. Students must take at least 36 hours of acceptable graduate credit. Of those hours, all courses in the SJMC taken toward graduation must be at the graduate level.

2. At least nine hours must be in a field of concentration outside the School of Journalism and Mass Communication. A minimum of three of those credits have to be at the graduate level (5000 or 6000 level).

3. At least 27 hours must be in School of Journalism and Mass Communication courses.

### Core Curriculum

All students, in all areas of specialization, must take 12 semester hours in the following core courses:

MMC 6402	Theories of Mass Communication	3
MMC 5445	Applied Research Methods in Media	3
MMC 6635	Contemporary Issues in Mass Communication	3
MMC 6950	Professional Project	3

### Journalism

The master's degree in Journalism is for those who wish to develop advanced journalistic skills as reporters for news-

papers, wire services, magazines, radio and television. Courses in the sequence, plus an outside concentration, permit the student to develop a specialization in one aspect of journalism.

Students pursuing the sequence in journalism may be mid-career professionals; may have a communication undergraduate degree but no professional experience; or may have an undergraduate degree in another discipline and no professional journalism experience.

Students in the last category will be required to complete necessary undergraduate journalism skills courses. Students in the last two categories must complete a professional internship as a requirement for the master's degree. Specific undergraduate course requirements will be determined by the journalism program coordinator.

In addition to the core courses, students must take the following courses:

JOU 6196	Advanced Writing Techniques	3
JOU 6197	Advanced Reporting Techniques	3
JOU 6198	Advanced Public Affairs Reporting	3
JOU 6199	Judicial System Reporting	3
JOU 6931	Seminar on Special Topics	3

### Student Media Advising

Designed primarily for journalism teachers and/or student media advisors on all levels, the program will train teachers/advisors or those aspiring to the profession in areas related to everyday work.

In addition to the core courses, students in the student media advising sequence must take the following courses:

JOU 5806	Student Media Advising	3
MMC 5207	Ethical and Legal Foundations of the Student Press	3
VIC 5203	Trends in Graphic Design	3

Students must also take two additional three-credit graduate courses in the School of Journalism and Mass Communication in an appropriate area of emphasis. Courses must be approved by the student's advisor.

### Public Relations

In addition to the core courses, students in the public relations sequence must take the following courses:

PUR 5406	Multi-Cultural Communications	3
PUR 5607	Public Relations Management	3

PUR 5806	Public Relations Strategy, Planning, and Evaluation	3
PUR 6935	Advanced Public Relations Seminar	3

Students must take one additional three-credit graduate course in the School of Journalism and Mass Communication in an appropriate area of emphasis. Courses must be approved by the student's advisor.

### Student Media Advising Certificate Program

This professional certificate program is designed primarily for journalism teachers and for student media advisors on all levels and for those aspiring to the profession. This program will satisfy the requirements of the certification, re-certification or incentive credits for current public school teachers in the field.

The Certificate in Student Media Advising requires 15 credits to be taken as follows:

### Required Courses

JOU 5806	Student Media Advising
MMC 5207	Ethical and Legal Foundations of the Student Press
VIC 5205	Trends in Graphics and Design

### Elective Courses

Students must take two of the following:

RTV 5936	Seminar in New Communication Technologies
MMC 6402	Theories of Mass Communication
MMC 6635	Contemporary Issues in Mass Communication
JOU 6196	Advanced Writing Techniques
PUR 4101	Publications Editing and Design
JOU 4208	Magazine Editing and Production or

other courses upon approval of faculty advisor.

### Course Descriptions

#### Definition of Prefixes

ADV-Advertising; FIL-Film; JOU-Journalism; MMC-Mass Media Communication; PGY-Photography; PUR-Public Relations; RTV-Radio-Television; VIC-Visual Communication.

**ADV 6355 Advertising and Society (3).** The relationship between advertis-

ing, economic, political, moral, and ethical issues.

**ADV 6805C Advanced Creative Strategy and Tactics (3).** Writing and visualization relevant to developing creative strategies for different media, clients and campaigns.

**JOU 5806 Student Media Advising (3).** Designed to assist teachers and advisers of journalism at the high school and junior college level, this course emphasizes the technical aspects of producing student newspapers, yearbooks, and magazines, as well as the legal and ethical considerations facing today's adviser. In addition, attention is given to matters pertaining to curriculum and methodology for effective journalistic instruction.

**JOU 6196 Advanced Writing Techniques (3).** Techniques of creative journalistic writing, including description, narration, anecdote, point of view. Prerequisite: Graduate standing.

**JOU 6197 Advanced Reporting Techniques (3).** Intensive instruction in how to find accurate and printable facts, with emphasis on use of public records. Prerequisite: Graduate standing.

**JOU 6198 Advanced Public Affairs Reporting (3).** A journalist's examination of how to report urban government and the forces shaping public policy and decision-making. Prerequisite: Graduate standing.

**JOU 6199 Judicial System Reporting (3).** A journalist's examination of the judicial system, from police headquarters to the courtroom. Prerequisite: Graduate standing.

**JOU 6931 Seminar on Special Topics (3).** Instruction in specialized areas of journalism.

**MMC 5207 Ethical and Legal Foundations of the Student Press (3).** Examines ethical and legal foundations underlying the operation of the student press on American campuses, stressing both rights and responsibilities and how to organize publications to protect both.

**MMC 5445 Applied Research Methods in the Mass Media (3).** An advanced course in the design, execution, and utilization of research studies by media practitioners with special emphasis on original proprietary studies.

**MMC 5661 Minorities and the Mass Media (3).** A critical review of the role of the mass media as it relates to ethnic, religious, and social minorities in a pluralistic society.

**MMC 5932 Special Topics Seminar (3).** A variable topic seminar dealing with issues of interest to the community. Examples are rights of high school journalists, cable TV, the use of mini-computers in creative communication.

**MMC 6402 Theories of Mass Communication (3).** Examines theories and processes of mass communication. Special emphasis on explaining, measuring and reporting the impact of mass communication. Prerequisite: Graduate standing.

**MMC 6635 Contemporary Issues in Mass Communication (3).** Contemporary issues regarding media responsibility to society and the social responsibility of communicators. Analysis and evaluation of media ethics and performance. Prerequisite: Graduate standing.

**MMC 6950 Mass Communication Professional Project (1-6).** The professional project is designed to demonstrate the student's excellence in an area of communication study. Must be completed within one calendar year. Prerequisites: Completion of Core, Sequence Courses and Electives.

**PUR 5406 Multi-Cultural Communications (3).** Explores the multi-cultural dimensions of communications with diverse audiences in the United States and abroad. Prerequisite: PUR 3000, PUR 4800 or permission of instructor.

**PUR 5607 Public Relations Management (3).** Operations and objectives of organized public relations activities and programs. The role of management in corporate and agency public relations and policy formulation in the public process. Prerequisite: PUR 3000 and PUR 4100 and PUR 4800 or permission of instructor.

**PUR 5806 Public Relations Strategy, Planning and Evaluation (3).** Advanced study in evaluating public relations effectiveness, measurement and interpretation of public attitudes, and development of campaign strategies. Prerequisite: PUR 3000, and PUR 4800 or permission of instructor.

**PUR 6935 Advanced Public Relations Seminar (3).** A series of case studies immerses students in the applications of public relations theory/principles to practice. A variety of different public relations fields will be studied. Prerequisites: PUR 5607 and PUR 5806.

**RTV 5806 Telecommunication Management Structures (3).** Intensive

study of telecommunication management problems, theory of same, solutions of same through practical application and examination of case studies. Prerequisite: Graduate standing.

**RTV 5935 Seminar in International Comparative Broadcasting Systems (3).** Introduction to international telecommunication systems with special emphasis on broadcasting. Comparison with other countries. Prerequisite: Graduate standing or permission of instructor.

**RTV 5936 Seminar in New Mass Communication Technologies (3).** Discussion of new communication technologies and their influence on the society. Prerequisite: Graduate standing.

**RTV 6309 Advanced Broadcast News (3).** Advanced techniques, principles and issues of reporting for the electronic media, from spot news to documentaries. Prerequisite: Graduate standing.

**RTV 6455C Field Production Practicum (3).** The student will be responsible for the organization and complete pre-production, production, and post-production of his/her project(s). Prerequisite: Graduate standing.

**RTV 6468C Studio Production Practicum (3).** The student will be responsible for the organization and complete pre-production, production and post-production of his/her project(s). Will also be required to do directing and I.D. work. Prerequisite: Graduate standing.

**RTV 6937 Seminar in Telecommunication Policies and Planning (3).** Introduction to national and international telecommunication policies, with emphasis on planning and decision making. Prerequisite: Graduate standing.

**VIC 5205 Trends in Graphics and Design (3).** Design principles and how they relate to trends in student and professional media, including newspapers, magazines and yearbooks. Deals with graphics, packaging, typography and modern design.



## School of Journalism and Mass Communication

Dean, J. Arthur Helse  
Associate

Dean Lillian Lodge Kopenhaver

### Faculty

**Adams, William, M.A.** (University of Wisconsin-Madison), Associate Professor, Journalism and Mass Communication

**Bolano, Gerardo, B.A.** (Institute des Hautes Etudes des Communications Sociales - Belgium) Deputy Executive Director, Central American Journalism Program

**Couch, James E., M.S.** (Florida State University), Associate Professor, Journalism and Mass Communication

**Delgado, Humberto, M.A.** (Goddard College), Associate Professor, Journalism and Mass Communication

**Fair, Charles, Ph.D.** (Ohio University), Associate Professor, Journalism and Mass Communication

**Green, Charles, B.A.** (Christian International University), Executive Director, Central American Journalism Program

**Hall, Kevin, B.A.** (Fordham University), Editor-in-Residence, Journalism and Mass Communication

**Helse, J. Arthur, Ph.D.** (Syracuse University), Professor and Dean, Journalism and Mass Communication

**Kelly, Laura, M.A.**, (American University), Assistant Professor, Journalism and Mass Communication

**Kopenhaver, Lillian Lodge, Ed.D.** (Nova University), Professor and Associate Dean, Journalism and Mass Communication

**Martinson, David L., Ph.D.** (University of Minnesota), Associate Professor, Journalism and Mass Communication

**Miller, Debra, M.A.** (Ohio State University), Assistant Professor and Assistant Dean, Journalism and Mass Communication

**Ogazon, Agatha, M.B.A.** (Hofstra University) Coordinator, Central American Journalism Program

**Rose, Patricia, M.B.A.** (University of Miami), Associate Professor, Journalism and Mass Communication

**Ruttenberg, Robert, M.A.** (New York University), Associate Professor,

*Journalism and Mass Communication*

**Shomaly, Denise, M.A.** (Minnesota), Academic Coordinator, Central American Journalism Program

**Stein, Mel, B.A.** (Hofstra College), Lecturer/Creative Director-in-Residence, Journalism and Mass Communication

**Veraldi, Lorna, J.D.** (New York School of Law), Assistant Professor, Journalism and Mass Communication

**Virtue, Jack, B.A.** (Carleton University) Associate Executive Director, Central American Journalism Program

**Wright, William, M.A.** (Pennsylvania State University), Associate Professor, Journalism and Mass Communication

**Yoon, Kak, Ph.D.** (Michigan State University), Assistant Professor, Journalism and Mass Communication

## School of Nursing

The School offers a program of study leading to the Master of Science in Nursing (MSN) degree to prepare qualified professional nurses for advanced nursing roles in the care of adults and children. The program offers clinical tracks in adult health nursing, psychiatric-mental health nursing, and family-centered nursing of children. Within each track, the student has the option of pursuing the functional role of clinical nurse specialist, nurse educator, or nurse administrator. The design of the program allows for the development of the nurse practitioner role as a base for the development of each of the three functional areas.

Throughout the curriculum, students are guided in the process of self-development to pursue excellence in professional and scholarly endeavors. The program allows flexibility within the basic curricular structure through the individualization of learning experiences, electives, thesis, and the opportunity to investigate an area of interest in advanced study.

The Curriculum model allows students to enroll on a full-time or part-time basis. The duration for the individual student study plan is determined in consultation with a faculty adviser and is based on the student's background and goals. The program can be completed in four semesters of full-time study, averaging a load of 9-12 credit hours per semester. Part-time study can be completed in a variable time but not to exceed six years.

### Program Objectives

Upon completion of the MSN program, graduates will be able to:

1. To provide specialized, comprehensive, quality care to clients in various settings.
2. Utilize appropriate teaching, management, consultative, and advanced clinical skills in the exercise of professional responsibilities.
3. Integrate developmental, ethnocultural, socioeconomic, biophysical, and psychosocial concepts in advanced professional role performance.
4. Investigate clinical problems and test theory, contributing to the theoretical basis of nursing and the specialty area.
5. Function as a leader and change agent in dealing with complex clinical or organizational problems in the health care and professional arena.
6. Demonstrate leadership in the development and implementation of professional standards and conduct.

Graduates are qualified to apply for ARNP licensure in Florida and are prepared for ANA certification as a nurse practitioner or a clinical specialist in the chosen specialty area of adult health or child health nursing.

### Admission Requirements

The applicant must:

1. Must meet the admission requirements of graduate education at Florida International University.
2. Have completed a baccalaureate degree in nursing which is accredited by the National League for Nursing (NLN). Applicants with a baccalaureate degree from nursing programs without NLN accreditation will be considered on an individual basis.
3. Have an undergraduate cumulative Grade Point Average (GPA) of at least 3.0 on a 4.0 scale.
4. Have evidence of a current RN licensure in Florida.
5. Have at least one year experience of clinical nursing.
6. Have completed an introductory course in statistics (3 credits), basic health assessment course (3 credits), and computer application (word processing).
7. Have obtained a combined score of at least 1000 on the verbal and quantitative scales of the Graduate Record Examination.
8. Provide the following:
  - a. Statement of philosophy of nursing and professional goals.
  - b. Letters of reference from: 1) a previous nursing faculty; 2) a current immediate supervisor; and 3) a co-worker.
9. For international students (graduates of foreign nursing schools) only:
  - a. TOEFL score of 500, minimum.
  - b. CGFNS, unless licensed as RN in Florida.

9. For international students (graduates of foreign nursing schools) only:

- a. TOEFL score of 500, minimum.
- b. CGFNS, unless licensed as RN in Florida.

### Application Process

Applicants need to complete the following steps in order to be considered for admission:

1. Complete two application forms as indicated and return to the appropriate offices to avoid unnecessary delay in the review process.
  - a. Application for Admission to Graduate Studies - To be returned with a \$15.00 nonrefundable service fee to: Office of Admissions, Florida International University, North Miami Campus, ACI-160, North Miami, Florida 33181.
  - b. Application for Admission to the Master of Science in Nursing Program - To be returned to: The Director,

Graduate Program, FIU School of Nursing, North Miami Campus, ACI-203, North Miami, Florida 33181.

c. Request an official transcript of records from each college or university attended. Transcripts should be sent directly to the Office of Admissions.

d. Send three reference letters directly to the Director of the School of Nursing Graduate Nursing Program.

e. Participate in an interview with a faculty member teaching in the graduate program. The interview is for the purpose of verifying application materials, reviewing admission criteria, identifying deficiencies and transferable credits, as well as projecting a tentative plan of study. The applicant should take an active role in the interview process to be informed about the program and the basis for the admission criteria.

### Degree Requirements

1. Completion of 42 semester credit hours. Minimum of 36 hours in nursing and 3 hours of non-nursing electives. The required non-nursing electives are restricted to supporting courses for the specialty area or the functional role.

2. Completion of a thesis (6 hours) or a master's paper (3 hours). Students electing a master's paper must complete an additional three hours of cognate course(s).

3. Achievement of an overall cumulative GPA of 3.0 or above. A cumulative GPA of less than 3.0 will place the student on probation for one semester, and she/he may be subject to dismissal if the 3.0 GPA requirement is not met after the probationary period.

4. Removal of all conditions, deficiencies, and incomplete grades. Credit hours for courses in which the grade is lower than 'C' will not count toward satisfying graduate degree requirements.

Students are expected to register for courses with letter grades. Electives may be taken as pass/fail subject to the approval of the adviser.

### Master of Science in Nursing Curriculum

#### Core Courses (12)

NGR 5035C	Advanced Client Assessment	3
NGR 5604	Culture and Advanced Nursing Practice	3
NGR 5110C	Theories in Nursing	3
NGR 5810	Research Methods In Nursing	3

**Clinical Concentration (12)****Advanced Adult Health Nursing**

NGR 6201C Advanced Adult Health Nursing I	3
NGR 6210L Advanced Adult Health Nursing Practice I	3
NGR 6202C Advanced Adult Health Nursing II	3
NGR 6211L Advanced Adult Health Nursing Practice II	3

**Advanced Psychiatric-Mental Health Nursing (12)**

NGR 6502C Advanced Psych-Mental Health Nursing I	3
NGR 6503L Advanced Psych-Mental Health Nursing Practice I	3
NGR 6504C Advanced Psych-Mental Health Nursing II	3
NGR 6507C Advanced Psych-Mental Health Nursing Practice II	3

**Functional Role (10)****Clinical Nurse Specialist Role**

NGR 6704L Role Synthesis in Advanced Nursing Practice	4
NGR 6726C Nursing Management and Quality Assurance Cognate Nursing Electives	3

**Nursing Educator Role (10)**

NGR 6710C Role Synthesis in Nursing Education	4
NGR 6713 Curriculum Development in Nursing	3
Cognate Non-Nursing Electives	3

**Nursing Administrator Role (10)**

NGR 6712L Role Synthesis in Nursing Administration	4
NGR 6725 Issues and Strategies of Nursing Administration	3
NGR 6726C Nursing Management and Quality Assurance	3

**Research (3-6)****Master's Thesis (6)**

NGR 6970 MSN Thesis I	3
NGR 6971 MSN Thesis II	3

**Master's Paper Option (3)**

NGR 6970 MSN Thesis I (Research Project)	3
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**Cognate Electives (3)****Electives (variable credits)****Sample Program Progression Plan (Full-Time Study)****Semester I**

NGR 5035C Advanced Client Assessment	3
NGR 5110C Theories in Nursing	3
NGR 6201C Advanced Adult Health Nursing I	3
NGR 6502C Advanced Psych-Mental Health Nursing I	3
NGR 6210L Advanced Adult Health Nursing Practice I	3
NGR 6503L Advanced Psych-Mental Health Nursing Practice I	3

**Semester II**

NGR 5604 Culture and Advanced Nursing Practice	3
NGR 5810 Research Methods in Nursing	3
NGR 6202C Advanced Adult Health Nursing II	3
NGR 6504C Advanced Psych-Mental Health Nursing II	3
NGR 6211L Advanced Adult Health Nursing Practice II	3
NGR 6507C Advanced Psych-Mental Health Nursing Practice II	3

**Semester III**

NGR 6971 Master's Thesis II	3
NGR 6726C Nursing Management and Quality Assurance	3
NGR 6710C Role Synthesis in Nursing Education	4
NGR 6725 Issues and Strategies in Nursing Administration	3
NGR 6725 Issues and Strategies in Nursing Administration	3
Cognate	3

**Semester IV**

NGR 6971 Master's Thesis	3
NGR 6710C Role Synthesis in Nursing Administration	3
NGR 6704L Role Synthesis in Advanced Nursing Practice	4
6712 Role Synthesis in Nursing Administration	4

**Sample Program Progression Plan (Part-Time Study)****Semester I**

NGR 5035C Advanced Client Assessment	3
NGR 5110C Theories in Nursing	3

**Semester II**

NGR 5604 Culture and Advanced Nursing Practice	3
NGR 5810 Research Methods in Nursing	3

**Summer**

NGR 6201C Advanced Adult Health Nursing I	3
NGR 6502C Advanced Psych-Mental Health Nursing I	3
NGR 6210L Advanced Adult Health Nursing Practice I	3
NGR 6503L Advanced Psych-Mental Health Nursing Practice I	3

**Semester III**

NGR 6202C Advanced Adult Health Nursing II	3
NGR 6504C Advanced Psych-Mental Health Nursing II	3
NGR 6211L Advanced Adult Health Nursing Practice II	3
NGR 6507C Advanced Psych-Mental Health Nursing Practice II	3
NGR 6726C Nursing Management and Quality Assurance	3
NGR 6710C Role Synthesis in Nursing Education	4
NGR 6725 Issues and Strategies of Nursing Administration	3

**Semester IV**

NGR 6971 Master's Thesis	3
NGR 6725 Issues and Strategies of Nursing	3
Cognates	5

**Semester V**

NGR 6710C Role Synthesis in Nursing Education	4
NGR 6704L Role Synthesis in Advanced Nursing Practice	4
NGR 6712 Role Synthesis in Nursing Administration	4
Cognate	3

**Course Descriptions****Definition of Prefixes**

NGR - Nursing Graduate

**NGR 5035C Advanced Client Assessment (3).** Refinement of health assessment skills fundamental to advanced nursing practice. Emphasis is on critical thinking and diagnostic reasoning required in accurate health assessments, differentiating normal and abnormal.

**NGR 5110C Theories in Nursing (3).** Analysis, evaluation, and application of nursing theories to practice, research, education and administration.

**NGR 5113 Theoretical Foundations of the Expanded Role of the Nurse (3).** A didactic course on expanded role realignment, legal-ethical implications of ARNP role, interviewing and communication skills and extant nursing models. Prerequisite: Florida RN with BSN. Corequisite: NGR 5145.

**NGR 5145 Psycho/Physiologic Basis of Advanced Nursing I (4).** A multidisciplinary didactic course integrating the nursing process and the relevant sciences as a basis for advanced nursing practice. Directed field clinical practicum on implementing the expanded nurse role in a specific setting. Prerequisite: Florida RN with BSN. Corequisite: NGR 5113.

**NGR 5145L Psycho/Physiologic Basis of Advanced Nursing I: Clinical Practicum (8).** Directed field practicum implementing the expanded nursing role in an ambulatory and/or acute care setting. Emphasis on differential diagnosis, initiating and monitoring protocols and case management. Prerequisites: Admission to ARNP certificate program. Corequisites: NGR 5145, NGR 5113.

**NGR 5146 Psycho/Physiologic Basis of Advanced Adult Nursing II (3).** An advanced multidisciplinary didactic course integrating the nursing process with related sciences as a basis for advanced nursing practice. Prerequisite: Florida RN with BSN. Corequisites: NGR 5740 and NGR 5745.

**NGR 5200 Physical Change and Healthy Aging (3).** Course focuses on primary health care and wellness with discussion and assessment of normal physiologic alterations and their relationship to common health concerns and medical problems of the elderly.

**NGR 5604 Culture and Advanced Nursing Practice (3).** Theoretical models explanatory of culture and behavior manifestation of cultural diversity. Focuses on multicultural nursing and methodology for nursing care throughout the life span. Prerequisite: Departmental permission.

**NGR 5810 Research Methods in Nursing (3).** Research methods and designs commonly used in nursing. Focuses on the research process as it is integrated through the interchange of

theory, practice and research. Prerequisites: statistics, graduate standing.

**NGR 5740 Theoretical Foundations of the Teacher/Manager/Advocate Role of the Nurse Practitioner (2).** A workshop group presentation on problems related to the teacher/manager/advocate role of the adult nurse practitioner in a client setting. Prerequisites: Florida RN with BSN. Corequisites: NGR 5146 and NGR 5745.

**NGR 5745 Case Management Preceptorship in Advanced Adult Health Nursing (7).** Advanced clinical case management preceptorship in adult geriatric family community or other selected specialty. Prerequisite: Florida RN with BSN. Corequisites: NGR 5740 and NGR 5146.

**NGR 5810 Research Methods in Nursing (3).** Research methods and designs commonly used in nursing. Focuses on the research process as it is integrated through the interchange of theory, practice, and research.

**NGR 5905 Independent Study in Nursing (1-10).** Individually determined, research oriented, in-depth study of a nursing problem or clinical experience as approved by the faculty preceptor. Prerequisites: BSN, permission of instructor, and admission to a graduate program.

**NGR 5936 Special Topics in Nursing (1-6).** Group study of a specific topic or a limited number of related topics in nursing. Prerequisite: Must be a nursing student or Florida licensed RN.

**NGR 6201C Advanced/Adult Health Nursing I (3).** Application of a conceptual model for advanced nursing practice focusing on adult clients in health and/or experiencing minimal-to-moderate alterations in adaptive responses to acute/emergent illness.

**NGR 6202C Advanced Adult Health Nursing II (3).** In-depth study of severe alterations in adaptive responses to chronic and acute multisystem illnesses. Refinement of practice models, integrating theories of nursing and related sciences. Prerequisite: NGR 5210. Corequisite: NGR 5810.

**NGR 6210L Advanced Adult Health Nursing Practice I (3).** Application of a conceptual model for advanced nursing practice focusing on adult clients in health and/or experiencing minimal-to-moderate alterations in adaptive responses to acute/emergent illness.

**NGR 6211L Advanced Adult Health Nursing Practice II (3).** Advanced nursing practice with adult clients experiencing severe alteration in adaptive responses to chronic/acute multisystem illnesses, focusing on comprehensive application of the nursing process. Prerequisite: NGR 6202C.

**NGR 6502C Advanced Psych Mental Health Nursing I (3).** Theoretical frameworks for therapies and conceptualization of theory-based practice. Model development for understanding human processes in health and illness. Corequisites: NGR 5604 and NGR 5110C.

**NGR 6503L Advanced Psych-Mental Health Nursing Practice I (3).** Application of the nursing process use of current research in individual, group, and family therapies. Time-limited and extended-care therapies in collaboration with interdisciplinary team. Corequisites: NGR 6502C and NGR 5810.

**NGR 6504C Advanced Psych-Mental Health Nursing II (3).** Development of inductive-deductive approach to theoretical understanding of person-environment patterns in multigenerational and multicultural population. Clinical specialist as therapist and manager. Prerequisites: NGR 5503 and NGR 5035C.

**NGR 6507C Advanced Psychiatric-Mental Health Nursing Practice II (3).** Application of the nursing process with clients presenting complex problems or in high risk situations. Collaborative process in therapy and consultation, and planned change. Corequisites: NGR 5503 and NGR 5810.

**NGR 6704L Role Synthesis in Advanced Nursing Practice (3).** Advanced nursing practice role with diverse client population. Role developed through contractual agreements in collaboration with faculty and mentors. Prerequisites: NGR 6507C and NGR 5211.

**NGR 6713 Role Synthesis in Nursing Education (4).** Application of teaching/learning theories to nursing and selected teaching/learning strategies. Demonstration of various teaching strategies. Teaching practicum. Prerequisites: NGR 6713, NGR 5211, and NGR 6507C.

**NGR 6712 Role Synthesis in Nursing Administration (4).** Intensive practicum applying leadership, decision-making, management, and administration theories and concepts under the guidance of a nurse execu-

tive preceptor and supervising faculty.  
Prerequisites: NGR 6725, NGR 5211,  
and NGR 6507C.

**NGR 6713 Curriculum Development in Nursing (3).** Curriculum theory and its application in nursing education. Curriculum construction, implementation, and evaluation are discussed from theoretical, philosophical, historical, and current perspectives.

**NGR 6725 Issues and Strategies of Nursing Administration (3).** Analysis of issues, principles, and concepts of nursing administration. Includes synthesis of behavioral and organizational theories with institutional goals in formulation of administrative strategies. Prerequisites: NGR 5210 and NGR 5503.

**NGR 6726C Nursing Management and Quality Assurance (3).** Role of nurse managers in developing and implementing quality-assurance programs; implications of such programs on health care delivery. Includes role of middle management in personnel development and promoting nursing research in the clinical arena. Prerequisites: NGR 6709, NGR 6701, and NGR 6712.

**NGR 6970 Master's Thesis I (3).** Refinement of research proposals focusing on methodology and pilot study. Hands-on experience on computerized data analysis. Completion of a research project for non-thesis students. Prerequisite: NGR 6504C, NGR 6211L, NGR 5810.

**NGR 6971 Master's Thesis II (3).** Implementation through completion of student's research project proposal. Prerequisite: NGR 6936.

## School of Nursing

Dean Linda Agustin Simunek  
Associate Dean Shirley A. Belock

### Faculty

Allen, Patricia H., RN, MSN (*Catholic University of America*), Visiting Assistant Professor

Belock, Shirley A., ARNP, Ed.D. (*Nova University*), J.D. (*University of Miami*), Professor and Associate Dean

Blais, Kathleen, R.N., Ed.D. (*Florida Atlantic University*), Associate Professor and Director Broward Program

Burkett, Marjorie, RN, Ph.D. (*University of Miami*), Assistant Professor

Canty, Janie, RN, MS (*University of Miami*), Assistant Professor

Chaves, Doris, RN, Ph.D. (*Mississippi State University*) Visiting Professor

Ellis, Avelia, RN, MS (*Barry University*), Visiting Instructor

Grossman, Divina, ARNP, Ph.D. (*University of Pennsylvania*) Associate Professor

Hartley, Jacquelyn, RN, Ph.D. (*Florida State University*) Associate Professor and Chairperson

Jorda, Marie Louise, ARNP, MPH, (*University of North Carolina at Chapel Hill*), Visiting Instructor

Lizardo, Maria Lourdes, ARNP, M.N. (*University of the Philippines*), Assistant Professor

Lobar, Sandra, R.N., M.S.N. (*Barry University*), Assistant Professor

Marchette, Lisa, RN, Ph.D. (*University of Texas at Austin*) Visiting, Associate Professor

Northrop, Celeste, ARNP, D.N.Sc. (*Catholic University of America*), Assistant Professor

Phillips, Suzanne, R.N., M.S. (*University of Utah*), Assistant Professor

Porter, Luz, RN, Ph.D. (*University of New York*), Professor and Director MSN Program

Seljan-Rush, Donna, ARNP, Ed.D. (*Florida International University*) Assistant Professor and Chairperson

Simunek, Linda Agustin, R.N., Ph.D., J.D. (*Loyola University of Chicago*), J.D. (*University of Miami*), Professor and Dean

Thornton, Rosa N., R.N., MPH (*Florida International University*), Academic Advisor

## School of Public Affairs and Services

The School of Public Affairs and Services contributes directly to the overall mission of Florida International University as a comprehensive, multi-campus, urban institution for advancing higher education, research and service in an international community environment.

The School provides education, training and research that responds to the professional development, problem assessment, policy formulation, and program implementation needs of individuals, public service agencies and other organizations addressing important public policy problems and issues in the state, the nation and the Latin American regions served by the University.

The School offers degree programs of professional study which provide academic and applied courses for students interested in public and non-profit organizational needs, management, and research. The School is organized into the Departments of Criminal Justice, Health Services Administration, Public Administration and Social Work. Each of these Departments offers both the baccalaureate and master's degrees. In addition, a Doctor of Philosophy (Ph.D.) is offered by the Department of Public Administration, and a Ph.D. in Social Welfare is offered by the Department of Social Work.

### Admission

Applicants to the School must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the School and Department.

### Graduate Admissions Requirements

Policies on admissions and prerequisites for the graduate programs are described in the appropriate departmental sections of this catalog. At a minimum, a student planning to enroll in one of the graduate degree programs in SPAS must:

1. Meet the general University requirement for admission to a graduate program.
2. Hold a bachelor's degree from a regionally accredited college or university.
3. Meet the minimum requirements of a 3.0 GPA in upper-division grades or a minimum score of 1000 on the Graduate Record Examination

entrance examination, and specific department requirements for admission.

4. In addition to the above, a foreign student whose native language is not English must present a minimum score of 500 on the TOEFL, or equivalent score on a comparable examination. See General Admissions Requirements for International Students in the General Information section of this catalog.

### Academic Advisement

A student who has been accepted to a degree program in the School will be assigned an academic advisor by the Department in which the academic major is desired. Continued contact (at least once a semester) with the academic advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

### Degree Requirements

To be eligible for a master's degree within the SPAS, a student must:

1. Satisfy all University requirements for a master's degree.
2. Meet the requirements for an approved program of study. This program of study must be approved by the appropriate Department Director.
3. Earn a minimum GPA of 3.0 in all work completed in the student's graduate program of study.
4. Earn a minimum grade of 'C' in all program courses to be eligible for graduation. A student must repeat all courses in which a grade of 'D' or 'F' was received, and earn minimum grades of 'C'.
5. Under the University's forgiveness policy graduate students may repeat no more than two courses with no course being repeated more than once. The course shall be repeated on a letter grade basis.

### Transfer Credit

The student may request and receive permission to transfer graduate credit to his or her master's degree program, provided that:

1. The hours requested do not exceed the maximum hours allowed by the Department.
2. The transfer courses were taken at the graduate level at an accredited college or university.
3. Grades of 'B' or higher were earned.
4. The courses are judged by the Department Director to be relevant to the student's graduate program.

5. The credits are transferred the same semester the student is admitted to the graduate degree program.

6. The credits were not used in satisfying the requirements for another degree, or included in another degree.

7. The credits were completed within six years preceding the admission to the graduate degree program.

### Time Frame for Completion of Degree

All work applicable to the master's degree requirements, including transfer credit, must be completed within six years immediately preceding the awarding of the master's degree.

### SPAS Graduate Level Courses

The 5000-level courses are open to graduate students and to undergraduate seniors with permission of the instructor.

The 6000-level courses are open only to graduate students.

The 7000-level courses are open only to doctoral students.

### Clinical and Field Experiences

As an integral part of the program curriculum, the student may be provided supervised learning experiences in community service agencies. The clinical and field work experience is one of orientation, observation, and practice in the particular program specialty of Public Affairs and is structured concurrently with relevant classroom experiences. Numerous community organizations provide opportunities for student internships and field practices.

### Continuing Education and Special Programs

The School of Public Affairs and Services, in cooperation with the Division of Continuing Education, offers many credit, non-credit, and workshop courses in Off-Campus locations in Dade, Broward, and Monroe Counties. Courses and locations vary each semester and the departments should be contacted for specific offerings.

Note: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Criminal Justice

**Luis Salas, Professor and Acting Director**

**Robert Clark, Professor**

**Jose Marques, Associate Professor**

**Regina Shearn, Associate Professor**

**Robert Snow, Associate Professor**

**Ray Surette, Associate Professor**

**W. Clinton Terry, Associate Professor**

**William Wilbanks, Professor**

Criminal Justice is an area of study dealing with the formal mechanisms of social control by which society exercises constraint over its members. The study of criminal justice is interdisciplinary. It involves law, the social and behavioral sciences, crime, the reaction of society to the crime problem, and the means utilized in treating it.

A variety of career opportunities are available in criminal justice at all levels of government and the private sector. Due to its interdisciplinary approach, the study of criminal justice fills the needs of students seeking careers in teaching, research, law, and within the various agencies of the criminal justice system.

### Master of Science in Criminal Justice

The Master of Science degree program in Criminal Justice is a professional program designed to prepare students for management responsibilities in the criminal justice sector or public sector related activities.

The objectives of the master's program are:

1. To provide present and future criminal justice managers with the skills needed to function effectively in our ever-changing society.

2. To serve as a catalyst for interdisciplinary research and study of criminal justice and related problems.

3. To provide the criminal justice system with qualified students for academic careers in administration, planning and analysis, and teaching in colleges and universities.

Students having a bachelor's degree from an accredited institution and a minimum of a 3.0 GPA in all undergraduate upper division work, or a total score of 1000 on the Graduate Record Examination (verbal and quantitative) or a score of 500 on the Graduate Management Admission Test (GMAT), or a graduate degree from an accredited institution are eligible for admission to the program. All applicants must complete the GRE prior to full admission status. A maximum of 12

semester hours may be taken as a non-degree seeking student. This status does not guarantee admission to the degree program.

### Degree Credit Requirements

The Master's degree in Criminal Justice requires (36) semester hours of credit. A maximum of (6) semester hours not included in another degree may be transferred into the program from an accredited institution, subject to the approval of the department director.

Candidates have the option of two programs of study: the thesis and non-thesis options. Those selecting the thesis option are required to complete 30 semester hours of course work and six semester hours of thesis. The non-thesis option consists of 36 semester hours of coursework. All candidates must take six core courses.

### Specific Program Requirements

Six courses in criminal justice are required and the remaining courses are electives, two of which may be thesis requirements, and two may be taken outside of criminal justice if no courses have been transferred into the program from another degree program.

### Core Courses: (18)

CCJ 5288	Legal Issues for Criminal Justice Administrators	3
CCJ 6025	Theory in Administration of Justice	3
CCJ 5105	Police Organization, Behavior, and Administration	3
CCJ 5285	Judicial Process and Policy	3
CCJ 5445	Corrections and Correctional Management	3
CCJ 6705	Advanced Research Methods	3

### Electives: (18)

CCJ 5056	History and Philosophy of Criminal Justice	3
CCJ 5216	Criminal Law	3
CCJ 5235	Criminal Procedure	3
CCJ 5286	Comparative Law	3
CCJ 5287	Legal Aspects of Corrections	3
CCJ 5525	Seminar in Juvenile Delinquency	3
CCJ 5605	Deviance and Social Control	3
CCJ 5669	Minorities In Justice Administration	3
CCJ 5935	Special Topics	3
CCJ 6456	Administration and Management of CCJ Agencies	3

CCJ 6477	Seminar in Information Systems	3
CCJ 6665	Victimology and Criminal Justice System	3
CCJ 6706	Applied Statistical Techniques for CCJ	3
CCJ 6716	Planning and Program Evaluation	3
CCJ 6915	Directed Individual Graduate Study in Criminal Justice	3
CCJ 6945	Field Research in CCJ	3
CCJ 6971	Thesis Research	1-3
CCJ 6976	Masters Thesis Defense	4

### Additional Procedures

Thesis tract students will select a committee of three graduate faculty members, the student's major faculty advisor being a member and chairperson of this committee. The major advisor and committee will be responsible for overseeing the student's work while in the master's program. Admission to the program should not be construed as admission to candidacy for a degree. Students may apply for candidacy upon completion of 15 semester hours. Admission to candidacy should be completed before the student enrolls for the last 12 hours.

### Graduation Requirements

To receive the master's degree in criminal justice, a student must satisfy all university regulations governing graduate study. Students in the thesis track must be admitted to candidacy and complete the six core courses, four electives, and the two thesis courses. The student may be required to undergo an oral discussion of the thesis. Students in the non-thesis track must be admitted to candidacy and complete the six core courses and six electives. A minimum GPA of 3.0 is required.

### Course Descriptions

#### Definition of Prefixes

CCJ Criminology and Criminal Justice.

CCJ 5056 **History and Philosophy of Criminal Justice (3).** The historical and philosophical background of criminal justice is presented as a basis for a more analytical understanding of the problems and prospects of criminal justice organization, management, and behavior.

CCJ 5105 **Police Organization, Behavior, and Administration (3).** Analysis of the organization and administration of police departments and their effects on police behavior.

**CCJ 5216 Criminal Law (3).** A concentrated study of the substantive criminal law based upon concepts, statutes, and cases that are enforced in state and federal courts.

**CCJ 5235 Criminal Procedure (3).** A case study of major legal cases dealing with criminal procedure in the United States.

**CCJ 5285 Judicial Process and Policy (3).** The functions, roles, and interactions of decision makers will be analyzed and evaluated. The policy decisions and processing of criminal cases within the judicial system will be examined.

**CCJ 5286 Comparative Law (3).** An analysis of the major legal families of the world. Emphasis shall also be given to legal families which are becoming more important as colonialism comes to a close.

**CCJ 5287 Legal Aspects of Corrections (3).** A study of the contemporary legal rights of convicted offenders, including the impact of litigation on offenders, correctional agency personnel and operations, and other justice agencies. Case law and statutes will be reviewed within the context of the punishment and/or rehabilitation of the offender.

**CCJ 5288 Legal Issues for Criminal Justice Administration (3).** The course will focus on a basic understanding of administrative law and procedures in the American system. Topics will include the methods and limitations of the administrative process as it is developing in the American legal system.

**CCJ 5347 Correctional Intervention Strategies (3).** An overview and critical assessment of treatment and rehabilitation programs in corrections, including prisons, probation and parole, halfway houses, and pre-trial programs. Relevant research will be reviewed.

**CCJ 5445 Corrections and Correctional Management (3).** The course focuses on current critical issues and problems in the management of adjudicated offenders in correctional systems. The organization and administration of community and institutional corrections agencies will be reviewed and their performance analyzed.

**CCJ 5525 Seminar in Juvenile Delinquency (3).** Focuses on the nature, scope and causes of delinquency; considers problems of the assessment and measurement of delinquency. The

philosophy, procedures, and effectiveness of the juvenile courts will be examined, including abuse, dependency, neglect, delinquency, and family law.

**CCJ 5605 Deviance and Social Control (3).** This course will cover the major theoretical issues and ideas concerning deviant and criminal behavior and methods of socially controlling these behaviors.

**CCJ 5669 Minorities in Justice Administration (3).** Focuses upon the disparity in outcomes for minority groups (i.e. racial/ethnic/sexual) across the criminal justice system, and on alternative explanations for those differences in outcome. Also, issues related to the hiring and promotion of minority groups who work in the criminal justice system will be discussed.

**CCJ 5935 Special Topics (3).** An intensive analysis of a particular topic in criminal justice not otherwise offered in the curriculum. Topics may change each term, but may include organized crime, white collar and political crime, victimology, ethics, terrorism, sentencing, information systems, and other topics based on student interest or current concern. May be repeated. Prerequisite: Graduate Standing.

**CCJ 6025 Theory in Administration of Justice (3).** The study of theoretical and research issues related to the nature and causes of crime and the administration of justice.

**CCJ 6456 Administration and Management of Criminal Justice Agencies (3).** An examination of the criminal justice system from the perspective of administrative and management theory. Emphasis is upon the identification of organizational and administrative problems and their solutions.

**CCJ 6477 Seminar in Information Systems (3).** An advanced seminar in the survey and application of electronic data in the criminal justice system. Prerequisite: COC 3300 or permission of instructor.

**CCJ 6665 Victimology and the Criminal Justice System (3).** An examination of the relationship of victims and offenders and the manner in which the criminal justice system responds to victims of crime.

**CCJ 6705 Advanced Research Methods (3).** Emphasis is placed on the design of research projects, the analysis of research data, and the utilization of research within the criminal justice system.

**CCJ 6706 Applied Statistical Techniques for Criminal Justice (3).** Statistical tools applicable to criminal justice research are examined. Emphasis is on developing an understanding of the various techniques and their applications. The use of computerized statistical packages will be presented. Prerequisites: STA 3122 and STA 3123, or permission of instructor.

**CCJ 6716 Planning and Program Evaluation (3).** A systematic review of the problems involved in productivity, improvement in criminal justice agencies, and program evaluation.

**CCJ 6915 Directed Individual Graduate Study in Criminal Justice (3).** Students can select a particular aspect of criminal justice for in-depth independent study with a criminal justice faculty. Prerequisite: Graduate standing.

**CCJ 6945 Field Experience in Criminal Justice (3).** A course designed to provide selected students an opportunity to engage in action-oriented research within a criminal justice agency on a designated research project.

**CCJ 6971 Thesis Research (1-3).** This course is devoted to the actual research labor required for a thesis in the Masters program.

**CCJ 6976 Masters Thesis Defense (1-3).** This course is devoted to the effort required to prepare the thesis document.



## Health Services Administration

**David Bergwall**, Associate Professor and Director

**Melissa Ahern**, Assistant Professor

**Fred Becker**, Associate Professor

**Gloria Decard**, Assistant Professor

**Thomas Dunaye**, Professor

**Burton Dunlop**, Associate Professor

**Rosebud Foster**, Professor

**Charles Frankenhoff**, Senior Lecturer

**Frederick Newman**, Professor

**Martha Pelaez**, Senior Lecturer

**Max Rothman**, Senior Lecturer

**Kris Siddharthan**, Assistant Professor

**Vandon White**, Professor

The Department of Health Services Administration offers graduate and undergraduate studies leading to Bachelors and Masters degrees in Health Services Administration.

The management of health services occurs in an environment of organizational and technological change. Administrators charged with executive responsibilities must be grounded in a high degree of formal professional training followed by lifelong learning which fosters their continuous professional growth. Many of the same skills needed for executive management are now also required to provide administrative leadership in staffing, directing, coordinating, and controlling the operational resources of administrative and clinical units in such organizations.

The graduate program provides professional education to train management executives for administration of complex health care organizations in governmental and private settings.

The Master of Health Services Administration (MHS) provides professional education for entry management careers in health services delivery organizations. The degree addresses the theories and issues of managing complex organizations in both public and private settings. The program is organized to meet the needs of the working student. Many individuals enrolled are already employed in administrative roles in the field. While enhancing their career, they bring the wealth of their experience to the classroom.

The Master's program is designed so that full-time students may complete all course work in five semesters. The same curriculum can be completed by part-time students within three years. Formal studies stress a basic foundation of professional knowledge, skills and competencies in management,

planning, analytic and policy functions of health services administration.

Since these studies provide a professional emphasis, the Department utilizes a variety of local hospitals, long-term care facilities, prepayment plans, mental health programs, multi-institutional corporations, emergency medical systems, health maintenance organizations, community health centers, and related public health and private agencies to give students supervise field experiences and a 'practical laboratory' for operational research in health service administration.

The goal of the Department of Health Services Administration is to create an academic center in which the University can respond to the educational needs of the field of health services administration. The Department's mission, therefore, is dedicated to the following educational objectives:

1. To provide professional studies in the theories, methods and practices of health care management, planning, analysis, applied research, and policy development in health services organizations.

2. To participate in interprofessional education experiences with faculty, students, and practitioners of the allied health sciences, public affairs, public health, and related human services professions interacting with the field of health care management.

3. To extend consultation and technical assistance to appropriate organizational settings and practitioners in health services and administrative practice.

4. To conduct scholarly and applied research on various management problems and issues of significance to improving the delivery of health services.

5. To review and revise program curricula and objectives from time to time in order to keep current with the changing educational and professional needs of the field.

### Master of Health Services Administration

#### Admission Requirements

Students seeking admission into the graduate program must meet the following minimum requirements:

1. Satisfactorily meet the general University requirements for admission to graduate programs.

2. Hold a bachelors degree from a regionally accredited university or college.

3. Show promise of success in graduate studies as determined by the faculty. Admission to the program will be based upon a combination of the Graduate Record Examination (GRE) and the upper-division (last 60 hours) grade point average. Students who have taken the Graduate Management Admissions Test (GMAT) may submit that score in place of the GRE. Each applicant must have a composite score on the verbal and quantitative sections of the GRE of at least 1000 (for the GMAT at least 450) or a GPA for the last 60 hours of 3.0 or higher on a 4.0 scale. All applicants are required to submit a GRE or GMAT score.

4. Foreign students must obtain a minimum score of 500 on the TOEFL examination.

5. Prerequisites for admission include coursework in accounting, statistics and micro-economics with a grade equivalent of 'C' or higher. Entering students are expected to possess basic microcomputer skills including word processing and spreadsheet applications. Students who do not have these skills or prerequisites may complete these requirements in their first semester of study.

Meeting the minimum requirements does not guarantee admission to the program. Admission will be based on additional factors including comparability of the applicants career goals with the programs objectives, relevance of work experience, etc. The Departmental Admissions Committee may require a personal interview as a part of the application process.

All applications for admissions should be received by the Department no later than two months preceding the semester in which the student wishes to commence the program. A maximum of 12 semester hours taken as an affiliated student can be used toward the degree. Affiliated status does not guarantee admission to the degree program.

#### Admissions Procedures

A student wishing to enroll in the graduate program must complete the following:

1. Submit a Graduate Application to the University Admissions Office.

2. Have official transcripts of all previously earned college or university credits sent to the Admissions Office.

3. Submit scores on the Graduate Record Examination.

4. Submit a program application including three letters of reference to the Department of Health Services Administration.

**Degree Requirements**

To be eligible for a Master's degree, a student must:

1. Satisfy all University requirements for the Master of Health Services Administration Program.

2. Complete a minimum of 51 semester hours of graduate level coursework in the department approved program.

3. Earn a minimum GPA of 3.0 or equivalent in all work completed at the University as a graduate student.

4. No courses in which a grade below 'C' is earned may be counted toward the master's degree.

5. A maximum of nine semester hour-credits of graduate coursework not included in another degree, may be transferred from an accredited university by petition at the time of admission.

All Department students completing the master's program are subject to graduate student regulations and degree requirements governed by the policies of the School of Public Affairs and Services and the University.

Courses are sequenced to enhance the development of competencies as students progress through the curriculum. Students need to pay attention to course prerequisites and adhere to course sequencing.

**Program Total: (51)****Core Courses required of all students: (45)****Group I**

HSA 5125	Introduction to Health Services	3
HSA 6415	Managerial Applications of Social Determinate of Health	3
HSC 5515	Statistical Methods for Health Services	3
HSA 6185	Health Care Management Theory and Practice	3

**Group 2**

HSA 6175	Financial Management of Health Systems	3
HSA 6186	Organizational Behavior in Managing Health Institutions	3
HSA 6187	Personnel Management and Labor Relations	3
HSA 6756	Applied Program Development and Evaluation Methods	3

**Group 3**

HSA 6155	Health, Policy and Economics	3
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HSA 6149	Strategic Planning and Marketing of Health Care Services	3
HSA 6195	Quantitative Managerial and Applied Research Methods	3
HSA 6176	Financing and Reimbursement of Health Delivery Systems	3

**Group 4**

HSA 6426	Health Law and Legal Aspects of Management	3
HSA 6717	Advanced Health Services Management and Research Seminar	3
One of the following three:		
HSA 6977	Master's Research Project or	
HSA 6875	Administrative Residency 3	
HSA 5876L	Administrative Residency in Nursing Home Settings	6

**Field Elective: (3)**

Electives should be taken during or after Group 3 courses. One elective must be taken from the following:

HSA 5225	Organization and Management in Nursing Home Administration	3
HSA 6215	HMO and Ambulatory Care Administration	3
HSA 6205	Hospital and Health Facilities	3
HSA 6245	Mental Health Administration and Planning	3

**Open Elective: (3)**

Students may select an elective course from the following courses or from other units of the University (i.e. public administrative, business administration, public health, or other disciplines) with an advisor's approval.

HSA 5408	Health Service Consumer Behavior	3
HSA 5935	Special Topics in Health Services	3
HSA 6905	Independent Advances Study	3
HSA 5226	Management in Long Term Care	3
HSA 5227	Applied Management in Long Term Care	3
HSA 5816	Practicum in Long Term Care Management	3
HSA 5455	Ethical Decision Making in Health Administration	3

HSA 5876L	Administrative Residency in Nursing Home Settings	3
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**Nursing Home Administration**

Students interested in nursing home administration and seeking licensure as a nursing home administrator in the State of Florida are advised to take the following courses within their program of study:

HSA 5225	Organization and Management in Nursing Home Administration	3
HSA 5226	Management in Long Term Care Systems	3
HSA 5227	Applied Management in Long Term Care	3
HSA 5816	Practicum in long term Care Management	3
HSA 5876L	Administrative Residency in Nursing Home Settings	6

**Administrative Residency**

A three-month administrative residency in a health care organization is offered to all students. Students lacking health services administrative experience are encouraged to complete administrative residency.

The residency is considered an integral part of the educational process. It is designed to provide practical experience with the theories, concepts, and administrative skills the students acquired during the first year of academic study. The residency is normally arranged in an agency or institution compatible with the students area of interest. The student works full-time with the health agency during this period. The faculty supervises the student during this period.

Students must apply for the administrative residency, be approved and placed in an agency by the Department the semester before the residency begins.

**Course Descriptions****Definition of Prefixes**

HSA - Health Services Administration;  
HSC - Health Sciences.

**HSA 5125 Introduction to Health Services (3).** The American health care system is broadly analyzed in social, economic, and political terms, including examination of its major operational and programmatic components as they

have evolved in their changing patterns and trends of organizational development.

**HSA 5225 Organization & Management in Nursing Home Administration (3).** Long term care institution organization and management are studied. Management implications of the social, economic, financial, and regulatory environment of nursing homes are examined. Prerequisite: HSA 5226

**HSA 5226 Management of Long Term Care Systems (3).** Organizational, financial, and policy issues in the management of long term care systems in the U.S. with special emphasis on State of Florida. Prerequisites: HSA 3180, HSA 4110 or HSA 6185..

**HSA 5227 Applied Management in Long Term Care (3).** Survey of theories of geriatric care for understanding the aging process. Focus is on the application of knowledge of the aging process to management and care giving in nursing homes. Prerequisite: HSA 5226. Corequisite: HSA 5225.

**HSA 5408 Health Services Consumer Behavior (3).** Course examines the factors affecting consumer choice in the utilization of types of health services, health services delivery locations, and methods of health care delivery. Examines the role of the provider in consumer behavioral model.

**HSA 5455 Ethical Decisions in Health Services Administration (3).** This course will study ethical principles as they apply to areas of management, supervision and clinical practice in the delivery of health care. Emphasis is on managerial decision-making. Prerequisites: HSA 5125, HSA 6185.

**HSA 5816 Practicum in Applied Management in Long Term Care (3).** Students will spend 180 hours in supervised practice in a nursing home setting. They carry out managerial responsibilities related to the administration of the facility.

**HSA 5876L Administrative Residency in Nursing Home Setting (6).** 480 hours of supervised practice in a selected nursing home. To provide experience in organization and management within the nursing environment. Prerequisites: HSA 5816, HSA 5225, HSA 5226, HSA 5227.

**HSA 6147 Comparative Health Systems and International Health Planning (3).** Students are directed through a study of the social, economic, political,

and cross-cultural aspects of comparing health care systems of different countries of the world in terms of international perspective and relevance to future developments in the U.S. system.

**HSA 6149 Strategic Planning and Marketing of Health Care Services (3).** Principles, techniques, and case study applications of strategic planning and marketing in the context of changing environmental, policy, and competitive forces in the health services industry. Prerequisites: HSA 6175, or permission of instructor.

**HSA 6155 Health Policy and Economics (3).** The impact of government, private sector, and various interest groups on health care policy determination is analyzed through the application of basic economic principles. Prerequisite: HSA 6175 or permission of instructor.

**HSA 6175 Financial Management of Health Systems (3).** Aspects of modern hospital and health care organization financial management are covered to prepare students for executive roles in policy planning and control responsibilities involving budgeting, auditing, investing, capital financing, etc. Prerequisite: HSA 5125, HSC 5515, HSA 6185, or permission of instructor.

**HSA 6176 Financing & Reimbursement of Health Systems (3).** Financing models for health delivery systems are examined. Reimbursement strategy of medicare, medicaid and other third party payors are analyzed. Prerequisites: HSA 6175 or permission of instructor.

**HSA 6185 Health Care Management Theory and Practice (3).** This is the anchoring course for examining each specialized study of the management functions in theory and in practice as they apply to health care organizations of both public and private sectors.

**HSA 6186 Organizational Behavior in Managing Health Institutions (3).** General theories of organizational behavior and executive functions are examined in their application to hospitals and other health agencies. Prerequisite: HSA 6185 or instructor's permission.

**HSA 6187 Personnel Management and Labor Relations (3).** Staffing function of manpower and related personnel resources in health care organizations; practices of wage determinations, take analysis, employee recruitment/selection, work evaluation,

collective bargaining, and contract negotiation implications. Prerequisite: HSA 6185 or permission of instructor.

**HSA 6195 Quantitative Managerial and Applied Research Methods (3).** Surveys the operations research tools and techniques used in health care organizations to solve operational and control problems that impact on efficiency, effectiveness, productivity, technological change, innovation, retrofitting. Prerequisite: HSC 5515 or permission of instructor.

**HSA 6196 Research Design and Applied Analytical Techniques for Health Care Information (3).** Develops skills and techniques for the quantitative analysis of various data sets for health organization administrative and clinical information. Prerequisite: HSC 5515.

**HSA 6197 Design and Management of Health Information Systems (3).** The development and management of health information systems to support managerial decision-making. Emphasis is on the integration of clinical, personnel, and financial data.

**HSA 6205 Hospital and Health Facilities Organization (3).** Administrative theory and management principles are examined in their application to the organizational analysis of hospitals and health care facilities. Prerequisites: HSA 5125, HSA 6185 or permission of instructor.

**HSA 6215 HMO and Ambulatory Care Administration (3).** Overview of the management process employed in health maintenance organizations (HMO's) and other group medical practices operating under various financial arrangements, including pre-payment. Prerequisite: HSA 5125, HSA 6185, or permission of instructor.

**HSA 6245 Mental Health Administration and Planning (3).** Psychiatric and mental illness institutions are examined in terms of specialized organizations and administrative knowledge required for the operation of these types of health care facilities and their particular patient populations. Prerequisite: Permission of instructor.

**HSA 6405 Behavioral Aspects of Health and Illness (3).** Psychological determinants of health, illness, and sick role behavior, with emphasis on risk taking behavior and preventive intervention. Critical review of models of health behavior.

**HSA 6415 Managerial Applications of the Social Determinants of Health**

(3). Social, psychological, and cultural determinants of health and their impact on health behavior and utilization are examined. Implications explored for managerial decision-making and health policy.

**HSA 6426 Health Law and Legal Aspects of Management (3).** The broad range of legal issues in health care and administrative aspects of law that concern health care managers are surveyed for implications concerning malpractice, patient rights, contracts, liability and immunity, taxation, surgical consent, etc. Prerequisite: HSA 6185 or permission of instructor.

**HSA 6717 Advanced Health Services Management and Research Seminar (3).** Integrates the theoretical and practical knowledge of other courses and activities in the curriculum. Selected case studies and relevant research drawn from the literature in health care management provide the substantive framework for seminar analysis of issues and policy questions. Prerequisite: Completion of all other coursework or permission of instructor.

**HSA 6756 Applied Programs Development and Evaluation Methods in Health Services (3).** Program evaluation as part of on-going assessment of effectiveness and resource consumption (costs). Evaluation models and study design are analyzed. Grant proposal writing is emphasized. Prerequisite: HSC 5515

**HSA 6875 Administrative Residency (3).** Off-campus placement in residency with health care organizations under supervision of a managing preceptor at the site. Prerequisite: Approval of the Coordinator.

**HSA 6905 Graduate Independent Study (1-6).** This course is designed to allow students an opportunity for in-depth literature research or an action-oriented project carried out under the supervision of their faculty advisor. Prerequisite: Permission of faculty advisor.

**HSA 6977 Masters Research Project (3).** The student will be field afforded the opportunity to conduct a research project on a specific health care management problem in a community or institutional setting. A formal proposal will be prepared and approved by faculty. Students will be expected to demonstrate during the course of this research project that they can implement theoretical knowledge and skills learned earlier in courses on research methods and design. Prerequisite: Permission of advisor.

**HSC 5515 Statistical and Research Methods for Health Services (3).** This course presents concepts of descriptive, inferential, and non-parametric statistics, including the use of common computer program packages for analyzing public and clinical health statistical data. Prerequisite: HSC 4510 or equivalent.

## Public Administration

**Harvey Averch, Professor and Director**  
**James Carroll, Professor**

**Milan Dluhy, Professor of Public Administration and Social Work**

**Howard Frank, Assistant Professor and MPA Coordinator**

**Jean-Claude Garcia-Zamor, Professor**  
**Donald Klingner, Professor and Ph.D. Coordinator**

**Ralph G. Lewis, Associate Professor**  
**Manny Lorenzo, Instructor**

**Stephen C. Loveless, Associate Professor**

**Carmen Mendez, Instructor**  
**Robert Meyers, Assistant Professor**  
**Gary Roberts, Assistant Professor**  
**Allen Rosenbaum, Professor and Dean**

**Ann D. Witte, Professor**  
**Barbara Yarnold, Assistant Professor**

### Master of Public Administration

The Master of Public Administration is intended to prepare students for careers in public service and non-profit organizations. It is also intended to prepare students for private sector positions for positions having significant contact with public organizations. The degree provides pre-service and mid-career students with an appropriate mix of technical and generalist skills needed for management and analytic positions in local, state, and federal government, as well as non-profit organizations. Students are given a broad-gauged exposure to the field in the core and subsequently develop expertise within their areas of specialization. The degree is also suited to provide students with the necessary analytic and substantive background for successful pursuit of doctoral studies within the discipline. Graduates are well-prepared for positions as city manager, finance director, budget analyst,

personnel director, special project coordinator and program analyst.

The program has been accredited by the National Association of Schools of Public Affairs and Administration.

### Admission Requirements

All applicants must hold a baccalaureate degree from an accredited college or university. In addition, each applicant must have a Graduate Record Examination (GRE) composite score of at least 1000 on the Verbal and Quantitative sections or a GPA of 3.0 or higher for all college course work at the junior and senior levels. All applicants regardless of previous GPA are required to submit the appropriate test scores.

In addition, applicants are required to submit: (1) a written personal statement concerning their interest in a career in the field; and (2) a recent writing sample from either their place of employment or previous academic work.

### Degree Requirements

The Master of Public Administration (MPA) program requires a minimum of 43 Semester hours, consisting of ten required courses (31 semester hours), and a minimum of four courses within the specialization.

### Core Courses

The MPA core consists of the following nine courses:

PAD 6053	Political, Social and Economic Context of Public Administration	3
PAD 5716	Information Systems for Public Organizations	1
PAD 6701	Quantitative Methods and Computer Skills	4
PAD 6706	Research Methods in Complex Public Organizations	3
PAD 6106	Organizational Theory and Administrative Behavior	3
PAD 6227	Public Finance and the Budgetary Process	3
PAD 6417	Public Personnel Administration	3
PAD 5256	Public Economics and Cost Benefit Analysis	4
PAD 6056	The Practice of Public Management	3
PAD 6305	Applied Policy Analysis and Management Science	4

PAD 5256, PAD 5716L, PAD 6701, PAD 6706, and PAD 6053 must be taken during the first 16 credit hours of course work. PAD 5716, Information Systems for Public Organizations, is a

prerequisite for PAD 6701, Quantitative Methods and Computer Skills. PAD 5256 or consent of instructor is a prerequisite for PAD 6305.

PAD 6056, The Practice of Public Management, is a capstone experience for the program and must be taken during the last semester of course work.

### Grading, Sequencing, and Substitution Policy

Students must maintain a 3.0 GPA to graduate. A grade of 'B' or better is required for every core course.

The Department reserves the right to withhold the awarding of credit for course work taken out of sequence and without appropriate prerequisites.

Any core course with the exception of PAD 6056 may be waived through petition to the Department Director and MPA Coordinator. The petitioner must demonstrate the equivalence of the previous course work, and prove that their performance met or exceeded core requirements.

### Specializations

At least four more courses (12 credit hours) must be taken in one of the following specializations, which are designed to strengthen the student's knowledge in a specific functional or policy area of public administration.

### Human Resource Policy and Management

Students must take three out of the following nine courses:

PAD 5427	Collective Bargaining and the Public Sector	3
PAD 5416	Social Equity and Human Resource Management	3
PAD 5460	Productivity Improvement	3
PAD 6109	Organizational Development and Change	3
PAD 5435	Administrator and the Role of Women	3
PAD 5043	Government and Minority Group Relations	3
PAD 6437	Dynamics of Individual Growth	3
PAD 6436	Professionalism and Ethics	3
PAD 5616	Contracting and Managing Third Party Governments	3

In addition to the above three courses, students must take:

PAD 6419	Seminar In Applied Personnel Systems	3
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### International Comparative and Development Administration

The following two courses must be taken:

PAD 6836	International Public Administration	3
PAD 6838	Development Administration	3

An additional course from the Department must be selected from the following:

PAD 6839	Comparative Public Policy	3
PAD 6225	Comparative Public Budgeting	3

One course must be taken from the following offerings of the College of Business and Department of Economics:

FIN 6626	International Bank Lending and Practices	3
FIN 6636	International Finance	3
MAN 6603	Problems in Comparative Management	3
ECS 5025	Economic Planning	3
ECS 5005	Comparative Economic Systems	3
ECS 5025	Economic Problems of Emerging Nations	3

### Budget and Analysis

Students must take the following three courses:

PAD 6205	Public Financial Management	3
PAD 5616	Contracting and Managing Third Party Governments	3

Students must take one of the following two methods courses:

PAD 7705	Applied Quantitative Analysis	4
PAD 6229	Advanced Management Techniques	3

### Law, Society and Policy

PAD 5038	Court-Agency Relations	3
PAD 5616	Contracting and Managing Third Party Governments	3
PAD 5838	Legal Issues in the Public Sector	3
PAD 6605	Administrative Law and Procedure	3
PAD 6436	Public Ethics and Professionalism	3

### Outside Specializations

Students who wish to construct their own concentrations in cognate areas of public administration such as criminal

justice, economics, social work, or anthropology may do so under the following conditions:

1. A written proposal specifying outside courses and concentration rationale must be presented to the Department Director and MPA Coordinator for approval no later than 15 semester hours into the students course work;

2. Students must satisfy all core requirements for the MPA; and

3. The outside concentration must have a minimum of 12 semester hours in addition to the 24 semester hour core.

Other Students who wish to enroll in the graduate program in Public Financial Management offered in conjunction with The School of Accounting, will be required to complete 48 semester hours to earn the MPA. Students in this program may substitute a thesis in lieu of PAD 6056 to satisfy degree requirements.

Pre-service students (those with less than two years post-baccalaureate work experience) are strongly encouraged to enroll in PAD 6946 (Internship) to supplement their academic course work. Students are normally limited to three semester hours of internship credit for their program of studies.

Students seeking to enroll in either PAD 6907 or 6915 for more than three credit hours must obtain permission from the MPA Coordinator prior to registration.

### Doctor of Philosophy

The Doctor of Philosophy in Public Administration (Ph.D. PA) is offered in affiliation with Florida Atlantic University. The basis of the degree is scholarship: one pursues the degree in preparation for a career in which scholarly competence and demonstrated capability to conduct significant research is an essential element and one is conferred the degree only after demonstrating such knowledge, in course work, in examinations, and in disciplined research. Its pursuit is a rigorous one, administered by a research-oriented faculty fostering the commitment to testing the boundaries of knowledge. The program should be entered only by those students who seek academic or research careers.

The program is designed to provide students with a firm command of relevant theoretical and operational knowledge and research skills in public administration and policy analysis and

to assist them in applying this knowledge to a broad array of career goals.

### Admission Requirements

Application for admission to the Ph.D. in Public Administration may be made either at FIU or FAU, but not to both. Generally applicants must have a Master's degree prior to program enrollment, though outstanding applicants may also be considered with only a baccalaureate degree. Admission is not restricted to students with prior course work in Public Administration and the Department encourages applicants with diverse academic backgrounds.

Admission into the Ph.D. program will be granted to students of superior ability who have demonstrated a record of previous academic success, good potential for continued success in doctoral studies, and a desire to prepare for a career in which scholarship and research are major elements. In order to document these qualities applicants must complete a university application form and submit a written personal statement concerning the reasons for pursuing a Ph.D. in Public Administration, a current resume, official GRE test scores, official transcripts of previous college course work, three recommendations using the department's recommendation form, and samples of written work. The Department may also request an interview with applicants.

Generally, an applicant is expected to have, at minimum, a GPA of 3.5 or better for all graduate coursework and a combined score of 1000 on the GRE quantitative and verbal sections. However, the admission process is competitive and the Department considers all of the evidence in the application file in making its decision. Meeting the minimum requirements does not guarantee admission and applicant's failing to meet the minimum requirements may be admitted based on other evidence of potential.

International students with a non-English native language must have TOEFL scores of 500 or above. International students with scores between 500 and 580 must take an intensive English course approved by the department during the summer prior to enrollment and must pass an oral and written English competency examination authorized by the department. Admitted students may transfer a maximum of six semester credits (not included in another degree) from other institutions toward Ph.D. degree requirements. Admitted students who can not demonstrate to the Department's satisfaction that they have the knowledge contained in the MPA core curriculum and the graduate Administrative Law

course at FIU will be asked to complete additional course work.

### Financial Aid

The objective of financial aid is to provide direct assistance to those students who require financial assistance to complete their doctoral programs, and to enhance the reputation of the program by attracting premier scholars.

To receive financial aid from University and Departmental sources, doctoral students must be enrolled full-time (9 semester hours during the term in which they receive financial aid). Department assistance is reserved for students with no outside employment.

The exact amount of financial assistance depends upon funding provided by the University and the legislature. The current level of departmental assistance is \$9,000 per calendar year, including a \$4,000 fellowship and \$5,000 research assistantship with a 10 hour per week work assignment. Students may earn an additional \$5,000 for 10 more hours of research assistance on grants and projects around the university. Students on assistantships are eligible for matriculation fee waivers paying the bulk of the tuition.

Departmental financial aid is awarded in one-year blocks, and is generally provided for two years of the student's doctoral study. Non-resident applicants may also apply for waiver of out-of-state tuition by contacting the Department at the time of admission.

The University has a variety of other financial aid opportunities including graduate grants (currently \$800 per semester for in-state students and \$1500 per semester for non-residents), scholarships, loans, work-study programs and targeted scholarships. Information on these and other opportunities are available through the university and school financial aid offices. Information about other financial aid opportunities is available through the University financial aid office.

To apply for a departmental assistance, Students should notify the Ph.D. Coordinator of their intent at the time of application. For matriculation fee waivers and University assistance, students must file the University's Financial Aid Form (FAF) and the other University aid documents. Information on the university procedures is available in the financial aid office of the School of Public Affairs and in the University's Financial Aid office.

### Degree Requirements

To be awarded the degree, admitted students must complete at least 65 semester hours beyond the master's de-

gree, or its equivalent, including 41 semester hours of approved course work and 24 hours of dissertation work after admission to candidacy. In addition, there is a residency requirement of at least 18 semester hours in three consecutive semesters of study during the first year of enrollment in the Ph.D. core curriculum. Successful completion of course work and passing scores on the comprehensive examination are required before students can advance to candidacy for the Ph.D. and present a dissertation proposal. Completion of all work must be within seven years after an applicant's admission into the program.

### Program of Study

The Doctor of Philosophy in Public Administration is a 65 semester hour program composed of five required courses (17 semester hours); two additional research tools electives (six semester hours); six courses within the student's specialization (18 semester hours); and Dissertation (24 semester hours). During the first semester of the program, students are required to select, with the assistance and approval of the program director and department, advisory committees chaired by a department faculty member and including at least two additional members. During the first two semesters of the program, students are required to develop a program of study with the assistance and approval of their advisory committee, the program director, and department.

#### Core Curriculum: (17)

PAD 7705	Advanced Quantitative Analysis	4
PAD 7707	Applied Research Methods	4
PAD 7026	Conceptual Foundations of Public Administration and Policy Analysis	3
PAD 7102	Advanced Organization Theory and Public Management	3
PAD 7055	Scope and Theory of Public Administration	3

#### Research Tools Courses: (6)

Students must complete at least six hours of course work (as required by their advisory committee) in research or quantitative methods. The courses are selected with the advice of the student's advisory committee and the program director and must be approved as part of the student's program of study.

**Specialization Courses: (18)**

Each student will select a specialization during the first year in the program. The specific courses in a student's specialization will be determined by consultation between the student and the advisory committee. The 18 semester hours of specialization can be earned in one of two ways:

1. The students may select their 18 semester hours from one of the following specializations currently offered: Public Policy, Policy Analysis, Public Organization Theory, Human Resources Administration, Comparative Administration, Budgeting and Public Financial Management, Program Evaluation, Science and Technology Policy and Criminal Justice Administration, or

2. Students may develop their own specialization in areas of their choice relevant to Public Administration and Public Policy, such as Health Services Administration, Environmental Policy, Urban Planning, etc. All specializations are developed after consultation with and upon approval of the advisory committee and program director.

**Yearly Progress Evaluation**

To insure reasonable progress is maintained the department conducts a yearly diagnostic review of each student's performance. The reviews result in a summary assessment of the student's progress and potential. If, in the course of the review, it is determined that remedial work is necessary special requirements may be established for the student. If it is determined that the student is not performing adequately the student may be dismissed.

**Qualifying Examination**

Upon completion of the methodological core courses students are tested on their understanding of research and quantitative methods. If the student fails the qualifying examination twice the student will be required to retake the methodological core courses.

**Comprehensive Examination**

After the completion of all course work, students will be given a written examination, or both, testing their knowledge of Public Administration and Policy Analysis and their specialization. Upon passing the components of the comprehensive examination, the student may apply for advancement to candidacy for the Ph.D. Students who fail the Comprehensive Examination twice are automatically dismissed in accord with general University policy.

**Dissertation: (24)**

Upon successful completion of the comprehensive examination, students select their dissertation guidance committee and begin preparation of their dissertation proposal. Upon the public defense and approval of the proposal, the student will initiate formal work on the dissertation. During this time, the student is expected to make appropriate progress toward completing the dissertation, and to enroll continually (at least three credits per semester) until the degree is completed. Upon completion, candidates will formally defend the research at a meeting conducted by the Dissertation Committee. The degree will be awarded upon a positive recommendation of the Committee and compliance with all policies and procedures required by the university.

**Certificates**

The department offers certificates in Human Resource Policy and Management, International Comparative Development Administration, and Public Management. Please refer to the Certificate section under the School for detailed information.

**Course Descriptions****Definition of Prefixes**

CGS-Computer General Systems;  
MAN- Management; PAD-Public Administration; PUP-Public Policy.

**CGS 6301/MAN 6830 Management Information Systems (3).** Introduction to the application of computers to information processing problems in organizations. This includes a survey of the basic computer hardware and software concepts necessary for users to work with information processing personnel. The rudiments of a computer programming language will be taught, and applied to data processing problems. Consideration will also be given to the managerial aspects of information systems planning and development.

**PAD 5041 Values and Technology in Modern Society (3).** Surveys personal and societal value assumptions in the context of the technological society. Examines organizational-societal value structures, and the ways in which technology creates rapid change and new alternatives in values. Also interrelationship of the past, present and future is explored, through futurism and forecasting techniques.

**PAD 5043 Government and Minority Group Relations (3).** Explores the pressing contemporary issue of the relationship between government and minorities. Examines the clash between established institutional values and minority group values, and surveys remedial programs aimed at dealing with the problem. Comparative case studies will be used to analyze public agencies' internal relations with minorities (recruiting, selection, etc.), as well as their different responses to the minority groups they serve.

**PAD 5256 Public Economics and Cost Benefit Analysis (4).** This course provides the quantitative and qualitative tools and case material to solve allocation problems in the public sector. A rigorous introduction to applied microeconomic theory is provided as well as an introduction to welfare economics. Market and government failure are analyzed as are the public alternatives available. The economics of innovation is contrasted to the benefit-cost analysis, cost effectiveness analysis and systems analysis are presented. The ethics of applied practice are discussed via actual cases and the important skills of communicating with decision makers are taught. At the end of the course, every student presents orally their analysis of an important real world allocation problem or an actual cost-effectiveness analysis drawn from their own work situation or experience.

**PAD 5416 Social Equity and Human Resource Management (3).** The course deals with the human resource management issues arising from equity and affirmative action requirements in the workplace.

**PAD 5427 Collective Bargaining in the Public Sector (3).** The course deals with the nature and implications of collective bargaining for managers and employees in (and students of) public organizations. The course emphasizes similarities and differences between the private and public sectors, as they apply to collective bargaining.

**PAD 5435 Administrator and the Role of Women (3).** The course is designed for women and men who are interested in moving into management positions, or who have done so and want to broaden their understanding of the changing role of women. Classes will allow for experimental as well as academic exploration of the issues. The course will also explore design, implementation, and evaluation of affirmative action programs.

**PAD 5443 The Public Administrator and Media Relations (3).** Surveys the government-mass communication media relationship, and then concentrates on the ways in which public managers handle media relations. Emphasis throughout is placed on questions of information-handling unique to public organizations, involving, for example, adherence to Florida's Sunshine Law and the Federal Freedom of Information Act.

**PAD 5460 Productivity Improvement (3).** Provides measures to improve organizational and worker productivity using applied behavioral science.

**PAD 5616 Contracting and Managing Third Party Governments (3).** Analyzes the legal foundations, administrative and economic characteristics of government instrumentalities as they are used to pursue public policy. Analyzes how and why different combinations of instrumentalities are used in different policy areas.

**PAD 5716 Management Support Systems in Public Organizations (3).** The course examines a variety of computer-based management support applications used in public sector organizations. It also explores design and implementation issues endemic to the public sector.

**PAD 5716L Information Systems for Public Organizations (1).** This course will provide an overview of microcomputer and mainframe skills required for substantive coursework in personnel, budgeting, and other core public sector functions.

**PAD 5934 Contemporary Issues in Public Administration (3).** An analysis of major conceptual issues currently facing public administrators. May be repeated.

**PAD 6042 Democracy and the Administrative State (3).** Juxtaposes the contemporary administrative condition of American government with the values of the democratic state. Different approaches to democracy - in practice as well as in theory - will be analyzed, and their implications for public organizations and individual administrators examined.

**PAD 6053 Political, Social and Economic Context of Public Administration (3).** Examines the context in which public organizations operate, stressing the relationship between such organizations and their multilayered environment. Emphasis is on examining

relevant social and cultural mores and patterns, political values and processes, governmental institutions, economic systems, resource availability, and other environmental factors currently significant to public organizations.

**PAD 6056 The Practice of Public Management (3).** This capstone course for the MPA Program will deploy skills, concepts, and knowledge acquired in previous coursework in analytic exercises related to students' areas of specialization. Prerequisites: Completion of MPA Core; last semester of coursework status.

**PAD 6106 Organization Theory and Administrative Behavior (3).** Historical perspective and philosophical foundations of contemporary and emerging organization theory and administrative behavior, with emphasis on concepts of administrative leadership, the organization's members and systems, group dynamics, socio-psychological aspects of organization and management.

**PAD 6109 Organizational Development and Change (3).** Contemporary approaches to improving the overall effectiveness of public organizations through the utilization of the applied behavioral sciences: personal and executive development programs, team building, action research, etc. Survey of research on the effects of organizational development programs, with special reference to public organizations.

**PAD 6205 Public Financial Management (3).** Capital asset administration, debt administration, revenue systems, public employee retirement programs, purchasing, inventorying, and risk management.

**PAD 6224 Advanced Seminar in Public Budgeting (3).** A review of the state of the art in public budgeting, emphasizing conceptual areas for significant research and appropriate methodological design for addressing them. Prerequisites: PAD 6227, PAD 6229, and PAD 6205.

**PAD 6225 Comparative Public Budgeting (3).** Public budgeting is a common activity in all governments and international organizations. Covers the differences in budgeting and explores patterns implicit in those differences.

**PAD 6227 Public Finance and the Budgetary Process (3).** Examines the theory and practice of public budgeting and its relationship to the administrative processes of control, management

and planning. Special emphasis will be given to the social balance question; the kinds and scope of government expenditures; the fiscal role of government in a mixed economy; sources of revenue available to government; administrative, political and institutional aspects of the budget and the budgetary process; and problems and trends in inter-governmental financial relations.

**PAD 6229 Advanced Management Techniques (3).** Explores quantitative revenue and expenditure models and other techniques which address public sector decision making under conditions of resource constraint. Prerequisites: PAD 5256, 6205 or permission of instructor.

**PAD 6305 Applied Policy Analysis and Management Science (4).** Presents techniques and tools for the practice of policy analysis in the public and non-profit sectors. Shows how to use quick methods of analysis to aid decision makers.

**PAD 6366 Policy and Program Implementation (3).** This course examines and evaluates the legal, socio-political administrative factors influencing the implementation of public policy and programs. Prerequisite: PUP 6015.

**PAD 6417 Public Personnel Administration (3).** This course focuses on the fundamentals of public personnel administration applied to general and specific issues of civil service. Some of the specific issues which will be considered are: the merit system and civil service history and development; manpower development and training; the application of the behavioral approach in personnel administration; unique public personnel management problems; governmental unionization and collective bargaining; and future perspectives in personnel administration.

**PAD 6418 Seminar in Public Personnel Management (3).** This course analyzes the four key values of social equity, political responsiveness, managerial efficiency, and employee rights and their relationship to the respective mediating functions and core personnel activities. Prerequisites: PAD 6417.

**PAD 6419 Seminar in Applied Public Personnel Management (3).** Analysis of advanced technique for staffing, productivity improvement and cutback management; focus on problems faced



by federal, state, local and non-profit agencies. Prerequisite: PAD 6417

**PAD 6436 Professionalism and Ethics (3).** Examines behavioral approaches toward understanding the personal world of public managers with emphasis on knowledge, skills, and abilities which aid effective goal accomplishment.

**PAD 6437 Dynamics of Individual Growth (3).** This course focuses on the importance of small group theory to the personal growth of the administrator, and the role of interpersonal abilities in effectively serving client groups. The course also deals with the expansion of the phenomenological world view of each student; and will look at existential theory and the dilemma of personal growth.

**PAD 6605 Administrative Law and Procedures (3).** Emphasizes the responsibilities public administrators have under local, state, and federal laws. Explores such concepts as client responsiveness under the law; the regulatory process; state administrative law systems; the executive order process; the relationship between administrative law and the checks-and-balance system; discretionary justice; and others.

**PAD 6701 Quantitative Methods and Computer Skills (4).** Introduction to basic quantitative tools for the analysis of problems arising in the management of organizations, and the application of these tools to real-life problems. (No credit will be given to students who have had undergraduate or graduate equivalents.) Prerequisite: Previous or concurrent enrollment in PAD 5716.

**PAD 6706 Research Methods in Complex Public Organizations (3).** Theories and concepts of research and evaluation. Specific focus given to action components of the research process: design and formulation, strategies and methodological tools for conducting research. Discussion of the role of research in administrative decisions and in testing ways to implement public policy. A review of contemporary critiques on research design. Prerequisite: PAD 6701.

**PAD 6715 Public Monitoring Systems for Government Organizations (3).** Focuses on the formal information system which is or can be used to guide a public organization and judge its performance.

**PAD 6807 Urban and Municipal Government Administration (3).**

Detailed examination of problems facing the municipal administrator; of the pressures upon the contemporary urban environment; and of the administration of large metropolitan areas comprised of numerous entities. Emphasis will be on determination of current trends, discussion of cases, and arrival at suggested solutions.

**PAD 6816 Regional and State Government Administration (3).** Surveys the historical development of regional administration, analyzes present administrative problems of the states, and explores contemporary and suggested remedial policies. Emphasizes the complex problems of the institutional relationships among local, state and regional governments, and their implications for public policy-making.

**PAD 6836 International Public Administration (3).** The role of public administration systems around the world; and the impact of political and socio-cultural frameworks on administration. Focus on national and state organizations' politics, economics, problems, and possibilities. A review of scope and programs of contemporary international public administration organizations.

**PAD 6838 Development Administration (3).** The role of public administration in national development, with specific attention to theories of economic aid from external sources, and the effects of this aid. Theories and policies of economic and social development are explored; and particular attention is given to the role of the United States in strengthening administrative capabilities as an important means for achieving developmental goals in selected countries.

**PAD 6839 Comparative Public Policy (3).** This course addresses policy formulation and implementation as a general process of administrative action that can be investigated among the varying nation-states. It covers the differences in policy and explores patterns implicit in those differences. Prerequisite: PAD 6836 or PAD 6838.

**PAD 6907 Independent Study in Public Administration (1-6).** (Normally 3 credit hours) Individual conferences; supervised readings; reports on personal investigations and similar undertakings. Prerequisites: Completion of required courses in public administration is expected. Consent of faculty sponsor and Department Director required.

**PAD 6915 Independent Research in Public Administration (1-6).** (Normally 3 credit hours) An individualized research project and report which, if feasible, should include field work with a public organization. Prerequisites: Completion of required courses in public administration is expected. Consent of faculty sponsor and Department Director required.

**PAD 6946 Public Administration Internship (1-6).** (Normally 3 credit hours) Supervised work in a public or quasi-public organization. Should not be undertaken until completion of required courses in public administration program. Consent of faculty advisor and Department Director required.

**PAD 7026 Conceptual Foundations of Public Administration (3).** This course analyzes the conceptual issues which provide the basic foundations for the field of public administration. Emphasis will be placed upon epistemological foundations and the philosophy of science and their implications for public administration as a field of study.

**PAD 7055 Scope and Theory of Public Administration (3).** An integrative capstone seminar in which traditional Models of Public Administration are explored and employed to analyze the structures and dynamics of public organizations and to develop alternative Models and new theoretical perspectives concerning the scope and theory of the field.

**PAD 7102 Advanced Organization Theory (3).** Philosophical foundations of contemporary organization theory, with emphasis on dynamic interfaces between the environmental contexts and organizations, critical analysis of both the normative and incremental orientation of concepts, theories, models, and applications. Prerequisite: PAD 6106 or equivalent.

**PAD 7257 Economic Context of Government (3).** This course examines interdisciplinary approaches to collective decision making and the delivery of public goods and services. Prerequisite: PAD 5256.

**PAD 7607 Legal Context of Public Administration (3).** This course analyzes the administrative significance of delegation, judicial review, rule making, freedom of information and sunshine laws, legislative veto, and liability for administrators. Prerequisite: PAD 6053.

**PAD 7702 Empirical Methods in Public Administration (3).** An advanced research/seminar practicum focusing in the development of theoretical models relevant to public administration and analytical techniques for testing these models. Particular attention is paid to structural equation models and latent measures.

**PAD 7705 Applied Quantitative Analysis (4).** Application of selected multivariate statistical and quantitative models to the field of public administration. Prerequisite: PAD 6701.

**PAD 7707 Advanced Applied Research Methods (4).** This course will provide students with an increased understanding of concepts of research methods through applied research projects related to public policy and public administration. Prerequisites: PAD 6701 and PAD 6706.

**PAD 7980 Dissertation (1-12).** This course provides dissertation guidance to doctoral candidates in the Ph.D. program in public administration. Prerequisite: Ph.D. candidacy in Public Administration.

**PUP 6006 Public Policy Analysis and Evaluation (3).** A framework for evaluating public policy-making will be presented. The emphasis will be on criteria and methodologies available for choosing among alternative courses of action. The systems approach, alternative futures, and nth-order consequences of policies will be analyzed.

**PUP 6015 Public Policy (3).** An intensive analysis of the normative theories of public policy making, with emphasis on the processes by which policy choices are made and implemented by government agencies. The current trends and perspectives of effective policy development (such as participatory democracy, multi-valued choice, etc.) are examined.

## Social Work

**Scott Briar, Professor and Director**  
**L. Yvonne Bacarisse, Associate Professor and Associate Dean**  
**Betty Blythe, Professor**  
**Katharine Hooper Briar, Professor**  
**Milan J. Dluhy, Professor of Public Administration and Social Work**  
**James E. Garrett, Associate Professor**  
**Mary Helen Hayden, Assistant Professor and Director of Field Instruction**  
**Michael Kolevzon, Professor**  
**Rosa Jones, Associate Professor**  
**Judy Kopp, Associate Professor**  
**Monte Koppel, Professor**  
**Sanford Kravitz, Distinguished Professor of Public Affairs**  
**Maria E. Pulg, Lecturer**  
**Magaly Queralt, Associate Professor**  
**Antoinette Rodgers, Assistant Professor**  
**Florence Safford, Associate Professor**  
**Phyllis Singerman, Instructor and Graduate Field Coordinator**  
**Betsy Smith, Associate Professor**  
**Karen Sowers-Hoag, Associate Professor and Coordinator Undergraduate Program**  
**Tony Tripodi, Professor**

The Department of Social Work offers graduate and undergraduate studies leading to the Master's and Bachelor's degrees in Social Work.

This profession requires a high degree of knowledge, skill, and dedication. The desire and ability to work effectively with people and to help solve social problems; demands a scientific understanding of society and human behavior; skills of social work practice; and identification with the values of the profession.

The Department also offers a Ph.D. in Social Welfare.

## Master of Social Work

The Department offers an integrated program that leads to the degree of Master of Social Work. The program is designed to give the student professional education for the advanced practice of social work. All students will be required to acquire or to possess the common base in the areas of professional study considered essential in social work education: human behavior and the social environment, social welfare policies and services, research, and social work practice. The knowledge acquired in the professional courses will be applied in supervised field experiences in social agencies.

All students will be expected to select one of two advanced concentrations - Services to the Elderly, or Services to Children and Families, and to plan a course and field practicum program that supports practice in the specialized field. With the help of faculty, students will develop individualized programs in the concentrations that seem most likely to meet their educational needs and contribute to their professional objectives.

For additional information regarding the graduate social work program of study and degree requirements, contact the Department directly.

The Master's program is accredited by the Council on Social Work Education.

## Admission Requirements

Applicants to the graduate program are required to meet the minimum standards set forth by the Florida Board of Regents and the graduate social work program. This includes a combined score of 1000 on the Verbal and Quantitative Aptitude Tests of the Graduate Record Examination or at least a 3.0 average in all upper-level division work. Application procedures for admission to graduate study will be found in the discussion of University procedure for admission to graduate study in the current catalog. An application to the Social Work graduate program, a personal narrative, and three letters of reference will be required for admission. A personal interview may be requested also. All applicants should have had college-level courses in biology (including coverage of Human Biology) and statistics and 12 semester hours in the social and behavioral sciences. Any deficiencies in these prerequisites must be completed by the end of the first semester in the program.

Applicants with a B.S.W. degree from a program accredited by the Council on Social Work Education will be considered for admission to advanced standing. Applicants for the advanced standing program will not be awarded any transfer credit, substitutions, or exemptions. Advanced standing is not automatically granted. It is subject to the following additional requirements: Successful completion of an appropriate field practicum in the undergraduate educational experience. Successful completion of the advanced standing core course requirements with grades of 'B' or higher. Admission to the second year concentration will be governed by successful completion of these additional requirements to the minimum standards set forth by the

Florida Board of Regents and the graduate Social Work program.

In addition to the school policies governing transfer credit the following regulations apply:

The following regulations govern transfer credits:

1. Courses taken at a CSWE accredited graduate school of social work in which the applicant was a fully admitted, may be transferred up to a maximum of 30 semester hours.

2. Graduate courses taken in other than accredited social work programs and that were not used to satisfy the requirements of another degree may be transferred up to a maximum of nine semester hours.

3. Students in the advanced standing program will not be awarded transfer credits.

4. Required concentration courses are not transferable.

### Degree Requirements

The Master of Social Work program is a 60 semester hour program composed of 30 semester hours of the required common base in the first year and 30 semester hours of concentration courses in the second year. The advanced standing Master of Social Work is a 41 semester hour program composed of 11 semester hours of required core courses and 30 semester hours of concentration courses.

A 'B' average is required for graduation. Any core course in which a student receives a grade lower than 'B' must be retaken. A passing grade in field courses is required for continuation in the program. Field courses cannot be repeated.

A student must successfully complete all work applicable to the Master of Social Work program within 48 months from initial admission. In unusual circumstances, and if the reasons warrant it, a student may petition the Department Director for an extension of the time limit.

#### First Year

##### Required Courses: (30)

SOW 5105	Human Behavior and the Social Environment I	3
SOW 5106	Human Behavior and the Social Environment II	2
SOW 5125	Human Behavior and the Social Environment III	2
SOW 5235	Social Welfare Policy I	2
SOW 5236	Social Welfare Policy II	2
SOW 5342	Social Work Practice I	3
SOW 5344	Social Work Practice II	3
SOW 5404	Basic Research Methodology I	3

SOW 5532	Field Practicum I	6
SOW 5542	Integrative Field Seminar I	1
Elective		3

#### Advanced Standing

##### Required Courses: (11)

SOW 5125	Human Behavior and the Social Environment III	2
SOW 5236	Social Welfare Policy II	2
SOW 5344	Social Work Practice II	3
SOW 5541	Advanced Standing Practicum Seminar	1
Elective: A Directed Practice Course		3

#### Second Year

##### Concentration Requirements: (30)

##### Services to Children and Families

SOW 6243	Child and Family Social Policy Issues	3
SOW 6281	Legal Aspects of Social Work Practice	3
SOW 6351	Intervention Strategies in Marriage and the Family	3
SOW 6435	Evaluative Research in Social Work I	3
SOW 6655	Intervention Strategies with Children and Adolescents	3
SOW 6535	Field Practicum II	8
SOW 6543	Integrative Field Seminar II	1
Elective		6

Note: Students interested in administration and supervision must develop a program of studies plan with the concentration coordinator.

##### Services to the Elderly

SOW 5641	Understanding the Process of Aging	3
SOW 6245	Social Welfare Policy and Services for the Elderly	3
SOW 6649	Social Work Practice in Long Term Care and the Elderly	3
SOW 6359	Social Work Treatment with Families of the Elderly	3
SOW 6281	Legal Aspects of Social Work Practice	3
SOW 6435	Evaluative Research in Social Work I	3
SOW 6646	Social Work Practice with the Elderly	3
SOW 6535	Field Practicum II	8
SOW 6543	Integrative Field Seminar II	1
Elective		3

Note: Students interested in administration and supervision must develop a program of studies plan with the concentration coordinator.

### Doctor of Philosophy in Social Welfare

The Doctor of Philosophy in Social Welfare (Ph.D. in Social Welfare) is designed to prepare students for active research careers and leadership roles in social welfare, social work, and social work education. The major purpose of the program is the development of research knowledge for the design, testing and implementation of effective interventions for social problems at all levels of intervention from clinical practice to social welfare policy.

The overarching emphasis in the Ph.D. program is on research to develop more effective interventions to address the social problems and meet the human needs of multicultural populations and communities. Students will pursue individualized courses of study focused on an area of specialization related to the social problems and levels of intervention of particular interest to the student. Mastery of state-of-the-art research methodologies and data analysis techniques is a key part of the program, and students will have an opportunity to conduct intervention research under the direction of experienced faculty members. Preparation for teaching is also offered in the program.

### Admission Requirements

Admission to the Ph.D. program in Social Welfare will be granted to students of superior ability who have been admitted to the graduate program of Florida International University. Applicants are required to submit:

1. An M.S.W. degree, or a master's degree in a closely related discipline, with at least a 3.5 GPA in graduate courses;
2. A combined score of at least 1000 on the quantitative and verbal scales of the GRE;
3. Documentation of completion of a graduate course in statistical methods. Students who have not met this prerequisite must take STA 6166 or an equivalent course in statistical methods in the first semester of the doctoral program.
4. Students for whom English is a second language must have a TOEFL score of 550 or higher;
5. Three letters of recommendation (two academic and one professional);

6. Two examples of written scholarly work;

7. A personal statement describing the applicant's professional and research interests and objectives.

All applicants must be approved by the Doctoral Committee. Applications for Fall semester admission are due by April 30 of the year of application.

### Degree Requirements

To be awarded the Ph.D. degree, admitted students must complete two years of fulltime course work plus a dissertation. The curriculum includes courses and seminars on theories of intervention, research priorities in social work and social welfare, issues in social welfare policy, research methodology, quantitative methods, and an individualized course of study in the social and behavioral sciences. Students will have the opportunity to select courses and tutorials with social work faculty on topics related to the student's specialized social problem and intervention interests. Other degree requirements include:

One year of residency, (i.e., completion of at least two consecutive semesters of fulltime study per semester during the first year following admission to the Ph.D. program); Successful passage of preliminary exams at the end of the first year; Successful completion of all course work required by the Supervisory Committee with a grade of B or higher; Passing scores on written and oral comprehensive examinations; Under the guidance of a Dissertation Committee, selection of a dissertation topic, preparation of an acceptable dissertation research project, completion of dissertation research, and defense of the dissertation.

### Program of Study

The Doctor of Philosophy in Social Welfare is a 64 semester hour program comprised of 11 required core courses, 3 required elective courses and 24 semester hours of dissertation study.

### Course Offerings

SOW 7215	Social Welfare Policy Seminar	3
SOW 7237	Social Welfare Research Priorities I	3
SOW 7238	Social Welfare Research Priorities II	3
SOW 7492	Research Methods in Social Welfare I	3
SOW 7493	Research Methods in Social Welfare II	3
SOW 7494	Advanced Social Welfare Research (elective)	3
SOW 7916	Supervised Research	6

SOW 7935	Advanced Seminar in Social Welfare	3
SOW 7936	Dissertation Seminar in Social Welfare	3
SOW 7939	Seminar on Social Work Education (elective)	3
SOW 7980	Dissertation Research	24
PAD 5934	Cost Benefit Analysis (elective)	3
PAD 7702	Empirical Methods in Public Administration	3
Applied Data Analysis for Social Welfare		4

### Course Descriptions

#### Definition of Prefixes

SOW - Social Work.

**SOW 5105 Human Behavior and the Social Environment I** (3). Study of individuals and families with emphasis on the analysis of bio-psycho-socio-cultural factors (including racial/ethnic and gender variables) affecting human development and social functioning through the life cycle. Prerequisites: Twelve semester hours of college-level courses in the social and behavioral sciences and one college-level course in biology (including coverage of human biology).

**SOW 5106 Human Behavior and the Social Environment II** (2). Study of the psycho-socio-cultural dimensions of groups, organizations, and communities with attention to racial/ethnic and gender factors and with emphasis on how these systems affect and are affected by human behavior. Prerequisite: SOW 5105 or equivalent.

**SOW 5109 Crises in the Lives of Women** (3). An overview of special experiences in the lives of women which might lead women to seek professional assistance. Topics include pregnancy, rape, abortion, childbirth, sex discrimination, climacteric, widowhood. Prerequisite: Senior or graduate standing.

**SOW 5125 Human Behavior and the Social Environment III** (2). Study of the psychosocial aspects of client problems, including psychopathology, frequently encountered by social workers in direct practice with attention to differential treatment issues. Prerequisite: SOW 5105.

**SOW 5235 Social Welfare Policy I** (2). A beginning study of a historical continuum of institutional mechanisms that carry out specific social welfare systems resulting from social policies

developed by society in response to social problems. Power, standards, and scarcity issues are identified, while various definitions basic to the social policy field are established and clarified. Basic analytical and evaluative criteria are introduced.

**SOW 5236 Social Welfare Policy II** (2). A study of the present institutional response to social problems and social policy evolution. Definitions, structure, and modes of financing are considered utilizing various models. Specific delivery systems, such as health, income maintenance, housing, corrections and child welfare, are explored. Evaluative criteria are further developed upon the framework used in Social Policy I. Prerequisite: SOW 5235 or equivalent.

**SOW 5324 Social Group Work Practice I** (3). Application of principles of social group work practice in an ecological framework. Skills in creating groups, goal achievement, termination and evaluation are stressed, analyzing issues of diversity. Prerequisite: SOW 5342 or permission of instructor.

**SOW 5342 Social Work Practice I** (3). Basic relationship building and interviewing skills development, in context of value base of the profession. Critical self and peer assessment built upon in-class and video taped case simulations. Appreciation of ecological, multidimensional assessment, utilizing written and video taped case materials, with opportunities to view social problems and social work practice with individuals, families and groups within a cross-cultural, multi-ethnic perspective. Prerequisite: SOW 5105.

**SOW 5344 Social Work Practice II** (3). This course is a continuation of SOW 5342. It includes application of change process theories, techniques, and intervention strategies dealing with groups, organizational systems, and communities. Prerequisite: SOW 5342 or equivalent. Corequisites: SOW 5542 and SOW 5532.

**SOW 5354 Crisis Intervention in Social Work Practice** (3). This course examines the etiology, structure, theory, and application of crisis intervention in social work practice. It provides assessment criteria for assignment to this form of treatment and techniques for intervention. Prerequisite: Senior or graduate level practice course, or permission of instructor.

**SOW 5404 Basic Research Methodology I** (3). This course provides information on the principles and methods of

basic social work research. The ethical conduct of research is taught within the context of social work purposes and values. The formulation of problems for study that address the social needs of diverse population groups is emphasized. Prerequisite: Statistics.

**SOW 5532 Field Practicum I (6).** A supervised educational field experience in an agency setting for a minimum of 384-clock hours designed to provide students opportunities to develop and apply generic practice skills in working with individuals, families, groups and communities. Prerequisites: SOW 5105, SOW 5235, SOW 5342. Corequisites: SOW 5106, SOW 5125, SOW 5236, SOW 5344, SOW 5542.

**SOW 5541 Advanced Standing Practicum Seminar (1).** Drawing on experiences from undergraduate fields practices, this seminar examines current issues and values in the profession, the relationship between theory and practice with a focus on the social environments in which clients function and the implications for policy and research. Prerequisite: BSW degree from a CSWE-accredited program. Co- or Pre-requisites: SOW 5125, SOW 5236, SOW 5344 and a direct practice course.

**SOW 5542 Integrative Field Seminar I (1).** This bi-weekly seminar, taken concurrently with the first field practicum (SOW 5532), requires students to analyze their field experience and integrate theory and practice. It provides an arena for students from various settings to come together in order to provide a richer understanding of social services at all levels. Majors only. Corequisites: SOW 5532 and SOW 5344.

**SOW 5605 Medical Social Work (3).** Principles of medical social work required in hospitals and community. Focus on the social worker as part of the health care team, with basic knowledge of medical problems of patients and their families. Prerequisite: Graduate or senior standing.

**SOW 5624 Feminist Therapy in Social Work (3).** Reviews basic principles of feminist therapy and focuses on the application of feminist therapy in clinical social work practice. Prerequisite: Graduate standing or permission of instructor.

**SOW 5635 School Social Work Practice (3).** Designed to assist students in developing knowledge and skills necessary for effective social work practice in school settings. Promotes understanding of SOW practice to improve the functioning of children. Prereq-

uisites: SOW 5342 or permission of instructor.

**SOW 5641 Understanding the Process of Aging (3).** Study of the physical, psychosocial, and cultural factors affecting human development in late life, from a social work perspective. Prerequisites: Graduate or senior standing and permission of instructor.

**SOW 5665 Animal Assisted Treatment for Social Work (3)** An introduction to the human animal bond and animal assisted treatment. There will be illustrations of programs using small animals, horses, and dolphins. Prerequisites: SOW 3313 or SOW 5342 or permission of instructor.

**SOW 5689 Social Work Practice with Sexual Problems (3).** Skills applicable to sex-related concerns encountered in social work practice. Presents theories of the etiology of common sexual problems; explores treatment intervention modalities. Prerequisite: Graduate or senior level practice course or permission of instructor.

**SOW 5710 Chemical Dependency and Social Work (3).** An overview of chemical dependency in the social service delivery system including policy and program approaches, client assessment, treatment techniques and prevention issues. Prerequisites: SOW 4322 or SOW 5342 or permission of instructor.

**SOW 5845 Counseling the Elderly (3).** Applied gerontological knowledge to counseling skills required for independent as well as frail elderly clients. Course focuses on long and short term interventions in a range of practice settings. Prerequisite: SOW 5641 or permission of instructor (this course cannot be used as an elective by concentrators in Services to the Elderly specializing in direct practice).

**SOW 5905 Individual Study (1-3).** Individually selected program of advanced supervised study related to specific issues in social work and social welfare. Prerequisite: Permission of instructor.

**SOW 5932 Seminar in Social Work (3).** An exploration of various critical issues of concern to the social work profession. Prerequisite: Graduate or senior standing.

**SOW 6243 Child and Family Social Policy Issues (3).** A comprehensive overview of the range of child and family policies, programs and issues in the U.S.A. in the context of comparing residual and institutional approaches to

social service delivery, and policy implications for use of each approach. Prerequisite: Admission to concentration.

**SOW 6245 Social Welfare Policy and Services for the Elderly (3).** Analysis of welfare policies and services affecting the elderly, including study of service delivery models and program strategies. Policy formulation and service implementation methods are examined. Prerequisite: Admission to concentration. Corequisite: SOW 5641.

**SOW 6247 Housing and Environmental Needs (3).** Examination of housing and broader environmental needs of individuals and families. Focus on needs for security, mobility, privacy, affiliation, and self esteem. Particular attention to the role of the professional social worker in meeting environmental needs. Prerequisites: SOW 5641 and SOW 6245.

**SOW 6281 Legal Aspects of Social Work Practice (3).** Introduction to legal aspects of social work practice including client and agency rights, malpractice issues, legal research, and practice interaction with legal counsel, legal services, and the courts. Prerequisite: admission to concentration.

**SOW 6351 Intervention Strategies in Marriage and the Family (3).** This course will provide students with an understanding and application of the major models of social work intervention in working with families, with critical analysis skills in assessing family functioning and in implementing intervention techniques. The influence of cultural/ethnic differences and how these may affect family relationships and functioning will be assessed. Prerequisite: Admission to concentration.

**SOW 6359 Social Work Treatment with Families of the Elderly (3).** Preventive and treatment approaches in social work practice with families of the elderly. Focus on aging family as client-system; knowledge, skills needed for a range of interventions are provided. Prerequisites: SOW 5641, SOW 6646.

**SOW 6372 Supervision, Consultation and Staff Development (3).** Key aspects of the social services supervisory situation are explored. This course emphasizes supervisory competence, issues facing supervisor and supervisee. Also explores consultation and staff development. Prerequisite: Admission to a concentration or permission of instructor.

**SOW 6386 Social Program Planning and Development (3).** Theory and practice of social program planning and development for organizations and communities. Social services to families, children and elderly, especially service needs for which programs do not exist will receive special emphasis. Prerequisite: Admission to a concentration, or permission of instructor.

**SOW 6387 Social Services Management Skills (3).** Learning units in which students practice and demonstrate, through simulation and participation, skills in major aspects of social services management. Prerequisite: Admission to a concentration or permission of instructor.

**SOW 6435 Evaluative Research in Social Work I (3).** This course focuses on research designs for evaluating social work practice and social programs. The ethics, politics, and conduct of evaluative research are taught within the context of the purposes, values, and ethics of professional social work practices. Prerequisite: Admission to concentration, or permission of instructor.

**SOW 6436 Empirically-Based Practice in Social Work (3).** Advanced utilization of intervention effectiveness research results and techniques in social work practice with individuals, families and groups. Prerequisites: SOW 6435 and an advanced practice course in a concentration.

**SOW 6535 Field Practicum II (8).** This field practicum is a 516-clock hour supervised educational experience in an agency setting designed to provide the student with an opportunity to develop and practice social work skills in the student's area of concentration. Majors only. Prerequisites: Admission to concentration, SOW 6281 and three graduate courses in concentration. Corequisites: SOW 6543, and an advanced practice course.

**SOW 6543 Integrative Field Seminar II (1).** This bi-weekly field seminar taken concurrently with the specialization field practicum in the concentration area requires students to analyze their field experience and integrate theory and practice. It provides an arena for various settings to come together in order to provide a richer understanding of social services. Majors only. Prerequisites: SOW 5532 and SOW 5542. Corequisites: SOW 6535 and an advanced practice course in the concentration.

**SOW 6611 Advanced Practice with Family Systems (3).** Advanced clinical skills in working with families and couples. Focus will be given to non-traditional change strategies such as family sculpting, family reenactment, family choreography and dramatization. Extensive use of video taped case simulations, co-therapy, live supervision and peer evaluation models. Prerequisite: SOW 6351 or permission of instructor.

**SOW 6646 Social Work Practice with the Elderly (3).** The knowledge and skills necessary for advanced social work practice in social agencies which deal with problems and issues of the aging population in contemporary society. Pre- or Corequisite: SOW 5641.

**SOW 6647 Advocacy in Social Work Practice (3).** This course covers skills and knowledge necessary for the practice of advocacy on behalf of individuals and groups, including political, legislative, and organizational perspectives. Prerequisites: SOW 5641 and SOW 6245.

**SOW 6649 Social Work Practice in Long Term Care and the Elderly (3).** This course focuses on direct practice with the frail elderly and their families within the rapidly changing system of community and institutional long term care. Prerequisites: SOW 5641 and SOW 6646.

**SOW 6655 Intervention Strategies with Children and Adolescents (3).** This course will provide students with the opportunity to select, apply and evaluate appropriate interventive strategies in working with children and adolescents. Specific attention to socio-cultural, gender and racial differences in understanding child and adolescent development issues and in critically assessing the applicability of practice theories. Prerequisite: Admission to concentration. Corequisite: SOW 6535 or permission of instructor.

**SOW 6656 Decision-Making in Child Placement (3).** This course will stress decision-making and interventions when substitute care is considered or carried out. Termination of parental rights and the choice and timing of placements of children will be considered. Prerequisite: Admission to concentration or permission of instructor.

**SOW 6914 Independent Research (1-6).** Individually selected program of supervised data collection and analysis on specific topics in social work and social welfare. Prerequisite: SOW 3403 or SOW 5404 or permission of instructor.

**SOW 7215 Social Welfare Policy Seminar (3).** This course analyzes the history and evolution of social welfare policy in the U.S. and examines the major theories and frameworks used to analyze social welfare policy. Prerequisite: Admission to Ph.D. program or permission of instructor.

**SOW 7237 Social Welfare Research Priorities I (3).** Analysis of research priorities in the development of effective interventions in the social welfare field. Prerequisite: Admission to Ph.D. program or permission of instructor.

**SOW 7238 Social Welfare Research Priorities II (3).** This course focuses on intervention research and methods at the community, organizational and societal level. Prerequisite: SOW 7237.

**SOW 7492 Research Methods in Social Welfare I (3).** Research purposes and methods concentrating on design, measurement, hypothesis testing, intervention assessment and analysis. Prerequisite or Corequisite: STA 6166 or equivalent. Prerequisite: Admission to Ph.D. program or permission of instructor.

**SOW 7493 Research Methods in Social Welfare II (3).** This second course in a two-semester sequence focuses primarily on design, measurement, and analysis issues in ethnographic field studies, surveys and group experiments for the evaluation of intervention technology in social welfare. Prerequisites: SOW 7492, and STA 6166, or equivalent.

**SOW 7494 Advanced Social Welfare Research (3).** Advanced research designs and data analysis techniques for use in developing interventions in social welfare. Prerequisites: SOW 7492 and SOW 7493.

**SOW 7916 Supervised Research (3).** Directed experience in the conduct of research in social welfare and social work under the guidance of a faculty member. Must be taken twice for a total of six credits. Prerequisite: Completion of first year.

**SOW 7935 Advanced Seminar in Social Welfare (3).** Course analyzes issues of contemporary interest to the field of social welfare. Emphasis is placed on examination of issues from a multi-level perspective. Prerequisites: SOW 7215, SOW 7237, SOW 7238, SOW 7492, and SOW 7493.

**SOW 7936 Dissertation Seminar in Social Welfare (3).** This course focuses on helping students with the development of the dissertation

prospectus. Emphasis is placed on development of acceptable research protocol in the students' specialization area. Prerequisites: SOW 7215, SOW 7237, SOW 7238, SOW 7492, and SOW 7493.

**SOW 7939 Seminar on Social Work Education (3).** This seminar provides students with an understanding of trends, issues and future prospects in social work education. Prerequisites: SOW 7215, SOW 7237, SOW 7238, SOW 7492, and SOW 7493.

**SOW 7980 Dissertation (3-12).** This course provides dissertation guidance to doctoral candidates in the Ph.D. program in Social Welfare. Prerequisite: Ph.D. candidacy in Social Welfare.

## Certificate Programs

### Department of Criminal Justice

#### Law and Criminal Justice Certificate

The Law and Criminal Justice academic certificate is designed to provide legally-conscious students with concepts and information utilized by law professionals. Study shall include case-work, procedures, court processes, research methods, and other introductory coursework designed to enhance careers in the legal profession.

#### Admissions

Students must be fully admitted to the Bachelor of Science degree in Criminal Justice or another bachelor degree program.

#### Certificate Award

The Certificate will be awarded upon completion of the required certificate courses and the bachelor degree requirements. The certificate will be posted on the student's transcript at the time the completion of the bachelor degree requirements is posted.

#### Required Criminal Justice Courses

The student shall complete a minimum of 18 semester hours of the following selected criminal justice courses with a minimum grade of 'C' in each course. Core criminal justice courses will not count for Criminal Justice majors.

CCJ 3271 Criminal Procedure 3

CCJ 3290	Judicial Policy Making	3
CCJ 3291	Judicial Administration	3
CCJ 4032	Crime and the Media	3
CCJ 4252	Criminal Justice and the Constitution	3
CCJ 4280	Law and Criminal Justice	3
CCJ 4282	Legal Issues in Corrections	3
CCJ 4752	Legal Research	3
CCJ 5216	Criminal Law	3
CCJ 5235	Criminal Procedure	3
CCJ 5286	Comparative Law	3

### Department of Health Services Administration

#### Certificate in Gerontology

The objective of the certificate is to provide graduate students and qualified practitioners in the field of aging with a range of gerontological courses leading to a specialization in gerontology to supplement their chosen disciplines.

Through provision of an in-depth understanding of the bio-socio-psychological nature of the aging process, and the relation of political and economic resources, the program's long range objective is to increase the knowledge and sensitivity of professionals in this area, and thereby improve the service delivery system for the increasingly large population of elderly Floridians.

#### Admission

Students must have a bachelor's degree and be admitted to the program by the Program Coordinator who will serve as their faculty advisor.

#### Program of Study: (18)

SOW 5643	Understanding the Process of Aging	3
NGR 5200	Physical Change and Healthy Aging	3

The balance of four courses to be selected from the following areas of concentration. Students who have not had direct practice with older people will be required to select an Individual Study course which will include 225 hours of practicum experience.

#### Long Term Care Administration

HSA 5225	Organization and Management in Nursing Home Administration	3
HSA 5226	Management in Long Term Care	3
HSA 5227	Applied Management in Long Term Care	3

HSA 5454	Ethical Decision Making in Health Services Administration	3
HSA 5816	Practicum in Long Term Care Management	3

#### Aging and Rehabilitation

OTH 5600	Study of Gerontology as Related to Occupational Therapy	3
OTH 5613	Interdisciplinary Approach to Aging	3
OTH 5630	Occupational Therapy Assessment of the Elderly	3
OTH 5764	Research (topic selected in Geriatric Clinical Specialty)	
OTH 5905	Independent Study (variable credit)	
PTH 6238	Motor Development: Adult Through Geriatrics	3
PTH 6239	Adult Congenital Handicapping Conditions	3

#### Psychology of Aging

DEP 5404	Proseminar in Psychology of Adulthood and Aging	3
DEP 6438	Gerontological Assessment	3
DEP 6465	Psychology of Culture and Aging	3
DEP 6446	Cognitive Processes of Aging	3

#### Social Work Practice with Older Persons

SOW 5605	Medical Social Work	3
SOW 5845C	Counseling the Elderly	3
SOW 5905	Individual Study	1-3
SOW 6245	Social Welfare Policy and Services for the Elderly <sup>1</sup>	3
SOW 6247	Housing and Environmental Needs	3
SOW 6359	Social Work Treatment with Families of Elderly <sup>1</sup>	3
SOW 6646	Social Work Practice with Elderly <sup>1</sup>	3
SOW 6647	Advocacy	3
SOW 6649	Social Work Practice in Long Term Care and the Elderly	3

<sup>1</sup>Open only to students with MSW degree or students in Master's degree program in Social Work.

#### Education

ADE 5195	Designing Education and HRD Programs for Disadvantaged Adults	3
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**Criminal Justice**

CCJ 5935	Special Topics: Crime and the Elderly	3
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**Department of Public Administration****Professional Certificate Development Administration and Management**

The objective of the Professional Certificate in Development Administration and Management is to develop skills and techniques for use by officials involved in public administration in developing countries and newly industrializing countries.

**Required Courses**

PAD 6836	International Public Administration
PAD 6838	Development Administration

An additional course from the Department must be selected from the following:

PAD 6839	Comparative Public Policy
PAD 6225	Comparative Public Budgeting

One course will have to be taken from the following in the College of Business Administration:

FIN 6626	International Bank Lending and Practices
FIN 6636	International Finance
MAN 6603	Problems in Comparative Management

One course must be taken from the following in the Economics Department:

ECS 5025	Economic Planning
ECS 5005	Comparative Economic Systems
ECS 5027	Economic Problems of Emerging Nations

Students enrolled in the certificate must obtain the consent of the certificate director before enrolling. Students must complete their program of study within three years from the date of admission and receive a minimum GPA of 3.0.

**Certificate in Human Resource Policy and Management**

Human Resource Policy and Management is designed to give graduate students a range of policy-analytic and management skills. It provides training in alternative personnel systems, (civil service, collective bargaining, privatization and contracting out), personnel

techniques for productivity improvement, current issues, and ethics and professionalism. This certificate emphasizes the application of behavioral science concepts and techniques to employers in a multi-cultural context.

**Admission**

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will also serve as their faculty advisor. Admission to a certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

**Note:** Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward an outside specialization in Human Resource Policy and Management. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

**Program of Study: (15)**

The following course is required:

PAD 6417	Public Personnel Administration	3
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Four of the following ten courses must be taken to complete the certificate.

PAD 5427	Collective Bargaining and the Public Sector	3
PAD 5460	Productivity Improvement	3
PAD 6109	Organizational Development and Change	3
PAD 5435	Administrator and the Role of Women	3
PAD 5043	Government and Minority Group Relations	3
PAD 6437	Dynamics of Individual Growth	3
PAD 6418	Seminar in Public Personnel Management	3
PAD 6419	Seminar in Applied Public Personnel Systems	3
PAD 6436	Professionalism and Ethics	3
PAD 5616	Contracting and Managing Third Party Governments	3

Students must complete their program of study within three years from the date of admission and receive no less than 3.0 GPA.

**Certificate in International Comparative and Development Administration**

This program is intended to develop skills and techniques for use by officials involved in development administration in developing and newly industrializing countries.

**Admission**

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will also serve as their faculty advisor. Admission to the certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

**Note:** Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward an outside specialization in International Comparative and Development Administration. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

**Program of Study: (15)**

The following two courses must be taken:

PAD 6836	International Public Administration	3
PAD 6838	Development Administration	3

An additional course from the department must be selected from the following:

PAD 6839	Comparative Public Policy	3
PAD 6225	Comparative Public Budgeting	3

One course must be taken from the following offerings of the College of Business Administration:

FIN 6626	International Bank Lending and Practice	3
FIN 6636	International Finance	3
MAN 6603	Problems in Comparative Management	3

One course must be taken from the following offerings of the Economics Department:

ECS 5025	Economic Planning	3
ECS 5005	Comparative Economic Systems	3
ECS 5027	Economic Problems of Emerging Nations	3

Students must complete their program of study within three years from



the date of admission and receive no less than a 3.0 GPA.

## Certificate in Public Management

This professional certificate program will provide students with a thorough understanding of the managerial concepts and techniques of public administration and is designed particularly for those who already have a professional field of specialization.

## Admission

All applicants must hold a baccalaureate degree from an accredited college or university. Students must be admitted to the program by the Program Coordinator, who will serve as their faculty advisor. Admission to a certificate program does not ensure admission to the master's degree in Public Administration (MPA) program.

*Note:* Those students who apply for and are admitted to the Master of Public Administration degree program may have Certificate courses credited toward the MPA core. However, if students have enrolled in more than one certificate program, a maximum of 15 semester hours from the certificate program may be accepted into the MPA program.

All certificate applicants will be encouraged to acquire proficiency in the use of microcomputers prior to initial registration. Applicants without this proficiency may wish to take PAD 5716, Information Systems for Public Organizations, prior to, or concurrent with, initial course work.

## Program of Study: (15)

PAD 6053	Political, Social, and Economic Context of PA	3
PAD 6106	Organization Theory and Administrative Behavior	3
PAD 6227	Public Finance and the Budgetary Process	3
PAD 6417	Public Personnel Administration	3
PAD 5934	Contemporary Issues in Public Administration	3

Students must complete their program of study within three years from the date of admission and receive no less than a 3.0 GPA

## School of Public Affairs and Services

Dean **Allan Rosenbaum**  
Associate Dean **L. Yvonne Bacarisse**  
Director of Administration and Budget **Manuel Lorenzo**

### Department Directors:

Criminal Justice (Acting) **Luis Salas**  
Health Services Administration **David Bergwall**  
Public Administration **Harvey Averch**  
Social Work **Scott Briar**

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- Yarnold, Barbara, Ph.D.** (University of Illinois), J.D. (DePaul University), Assistant Professor, Public Administration

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# Florida International University

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